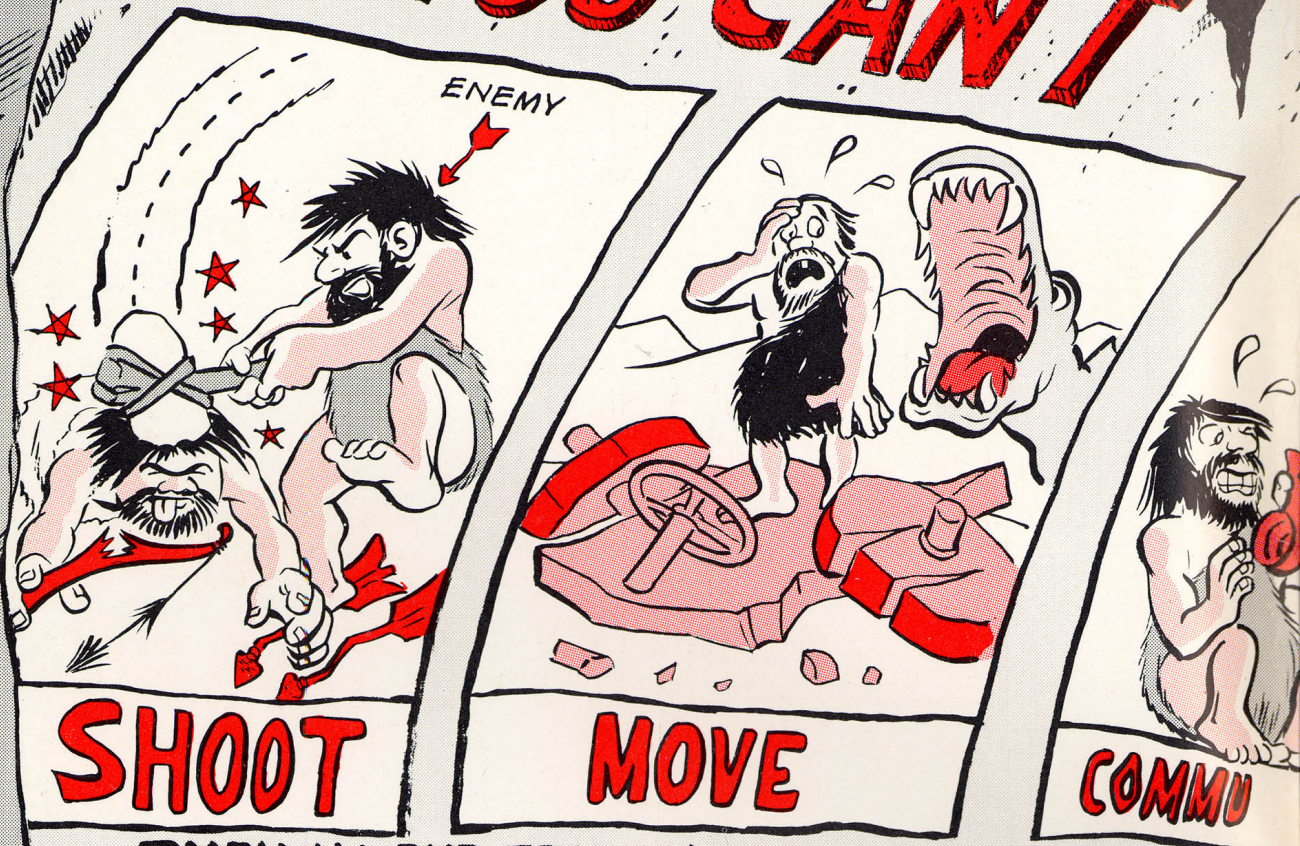
Issue 124
P.S
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
30
40
4
TONS
Will Eo Eisner
AND THIS IS WHY YOU'LL GENERALLY FIND SAFETY PRECAUTIONS RIGHT ALONG WITH MAINTENANCE AND OPERATIONS IN YOUR TM!

BATTERY GROUND STRAPS GO OFF FIRST... ...ON LAST!
SLOW
TO SAVE YOUR EQUIPMENT!
AND YOUR SKIN.
Issue 124
PS
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
30
40
Will Eisner
AND THIS IS WHY YOU'LL GENERALLY FIND SAFETY PRECAUTIONS RIGHT ALONG WITH MAINTENANCE AND OPERATIONS IN YOUR TM!

Maintenance Gives You–

FIRE POWER...COMMUNICATIONS

IF YOU CAN'T



...THEN ALL THE TRAINING, MONEY AND TIME SPENT IN GETTING YOU READY TO FIGHT HAVE BEEN POURED DOWN THE DRAIN..

If you're going to deliver your **firepower** where and when it's needed, you've got to be able to move **(mobility)** and to **communicate.**

You've got to have all three in modern war.

Your equipment must be ready to shoot, scoot and communicate. If it won't, you're in for a hot time.

That's why Preventive Maintenance is so dog-goned important these days. With it, you and the other guys in your outfit make sure the equipment you've got will do what it's supposed to when the balloon goes up. You'll have no time then for any "if," "maybe"—or "can we wait till next week, Sir?"

In order for you and your unit to be ready to fight at any time, your equipment has got to be ready.

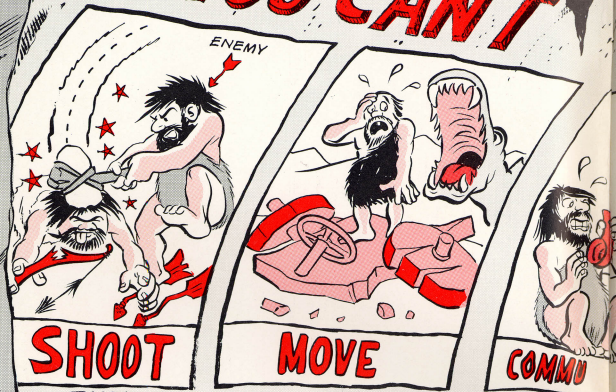
Preventive Maintenance will get it that way.

PM is your job.

Maintenance Gives You–

FIRE POWER...COMMUNICATIONS

IF YOU CAN'T



...THEN ALL THE TRAINING, MONEY AND TIME SPENT IN GETTING YOU READY TO FIGHT HAVE BEEN POURED DOWN THE DRAIN.,,

If you're going to deliver your **firepower** where and when it's needed, you've got to be able to move **(mobility)** and to **communicate.**

You've got to have all three in modern war.

Your equipment must be ready to shoot, scoot and communicate. If it won't, you're in for a hot time.

That's why Preventive Maintenance is so dog-goned important these days. With it, you and the other guys in your outfit make sure the equipment you've got will do what it's supposed to when the balloon goes up. You'll have no time then for any "**if**," "maybe"—or "can we wait till next week, Sir?"

In order for you and your unit to be ready to fight at any time, your equipment has got to be ready.

Preventive Maintenance will get it that way.

PM is your job.

...MOBILITY

PS

Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from U. S. Army Maintenance Board, Attn.: PS Magazine, Fort Knox, Kentucky.

THE PREVENTIVE MAINTENANCE MONTHLY Issue No. 124 1963 Series

IN THIS ISSUE

ARTICLES

	Page
Hawk	
Special Hawk Notebook	8-11
Flamethrower	
M2A1, M2A1-7	7
Small Arms	
M79 Grenade Launcher	2
M14 Rifle	2
M60 Machine Gun	3
Artillery	
106 Recoilless Rifle	6
M60 Tank Gun	12
XM117 Telescope Mount	5
Tracks	
M60 Tank	12-13
Wheel Hub Lube Leaks	14
M48 Tank	14
M88 TRV	15
Engines	16
Wheels	
Battery-Generator Indicator	17
¾-ton Truck	18-19
Electrical Repair Kit (Bendix)	20-26
Helicopters	
CH-34, UH-1A, UH-1B, OH-13G & H	38-41, 43-45
Cargo Pickup Hand Signals	41
Fixed Wing	
O-1, OV-1A	37, 42, 45
Radios	
RT-540 Receiver-Transmitter	48
LS-166 Loudspeaker	48
R-390/URR Receiver	49
Radio Cable Connections	50
Radio Power Feed Kit	51
24V Vibrator Tester	52
RT-66, RT-70 Dummy Antenna Meters	53
AN/TRC-24 Radio Set	54
Telephones	
H-144 & H-81 Handset Headsets	46
RL-39 Reel Assembly	47
TA-1/PT Telephone	49
Telephone Case Shrinkage	50
SB-86/P Switchboard	51
Radar	
PU-422/U Generator	56
Motion Picture Projection Set AS-2(1)	53
Publications News	28
Power Units and Generators	58-59
Welding Safety Precautions	60-61
Forms	
DA Forms 2408-7, 2408, 2404	62-64

GENERAL

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.

PS wants your ideas and contributions, and is glad to answer your questions. Names and addresses are kept in confidence, just write to:

Sgt Half-Mast,
PS Magazine,
Fort Knox, Ky.

PS

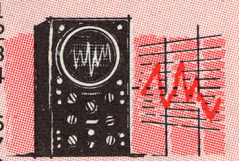
Published by the Department of the Army for the information of organizational maintenance and supply personnel. Distribution is made through normal publication channels. Within limits of availability, older issues may be obtained direct from U. S. Army Maintenance Board, Attn.: PS Magazine, Fort Knox, Kentucky.

THE PREVENTIVE MAINTENANCE MONTHLY Issue No. 124 1963 Series

IN THIS ISSUE

ARTICLES

	Page
Hawk	
Special Hawk Notebook	8-11
Flamethrower	
M2A1, M2A1-7	7
Small Arms	
M79 Grenade Launcher	2
M14 Rifle	2
M60 Machine Gun	3
Artillery	
106 Recoilless Rifle	6
M60 Tank Gun	12
XM117 Telescope Mount	5
Tracks	
M60 Tank	12-13
Wheel Hub Lube Leaks	14
M48 Tank	14
M88 TRV	15
Engines	16
Wheels	
Battery-Generator Indicator	17
¾-ton Truck	18-19
Electrical Repair Kit (Bendix)	**20-26**
Helicopters	
CH-34, UH-1A, UH-1B, OH-13G & H	38-41, 43-45
Cargo Pickup Hand Signals	41
Fixed Wing	
O-1, OV-1A	37, 42, 45
Radios	
RT-540 Receiver-Transmitter	48
LS-166 Loudspeaker	48
R-390/URR Receiver	49
Radio Cable Connections	50
Radio Power Feed Kit	51
24V Vibrator Tester	52
RT-66, RT-70 Dummy Antenna Meters	53
AN/TRC-24 Radio Set	54
Telephones	
H-144 & H-81 Handset Headsets	46
RL-39 Reel Assembly	47
TA-1/PT Telephone	49
Telephone Case Shrinkage	50
SB-86/P Switchboard	51
Radar	
PU-422/U Generator	56
Motion Picture Projection Set AS-2(1)	**53**
Publications News	**28**
Power Units and Generators	**58-59**
Welding Safety Precautions	**60-61**
Forms	
DA Forms 2408-7, 2408, 2404	62-64



GENERAL

Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.

PS wants your ideas and contributions, and is glad to answer your questions. Names and addresses are kept in confidence, just write to:

Sgt Half-Mast,
PS Magazine,
Fort Knox, Ky.

FIREPOWER

IF IT MOVES . . . YOU CAN SHOOT IT

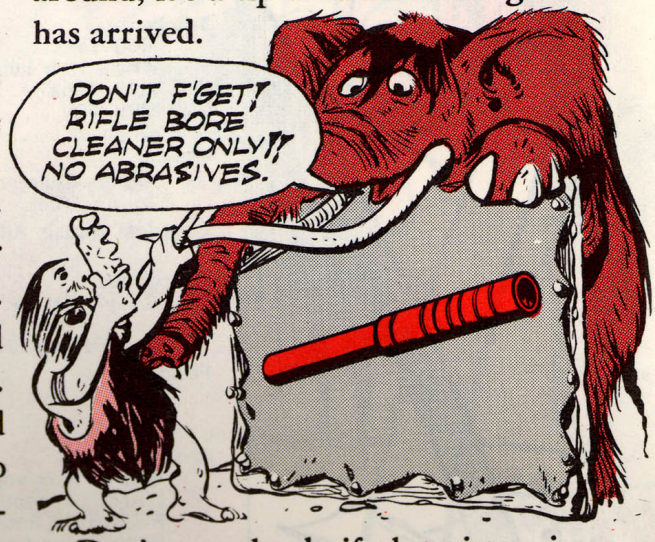
That's good advice—'specially when it comes to the gas piston on both the M14 rifle and M60 machine gun.

The piston on both of these 7.62-mm weapons is made of special rust-resisting metals, and the piston is best left alone unless your M14 or M60 comes up with a short recoil or acts a mite sluggish.

So don't pick up the habit of disassembling and cleaning the gas cylinder everytime you're cleaning your piece. Learn to leave well enough alone and save the wear and tear on your weapon.

The fastest—and easiest — way to check your gas cylinder piston action is to swing your weapon through an arc from the ground to the sky — and listen.

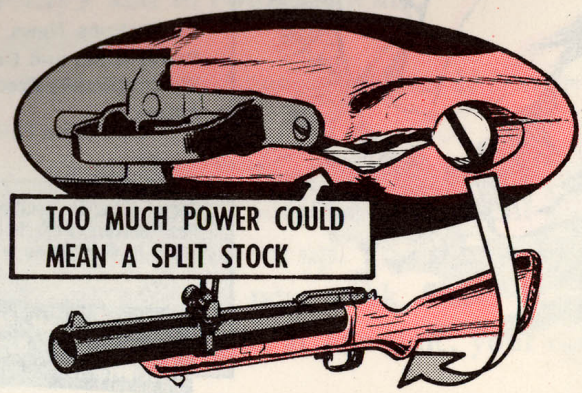
If you hear the piston moving back and forth under its own weight, it's clean enough—so hands off. Natch, if you don't hear the piston sliding around, it's a tip off that cleaning time has arrived.



Don't get shook if the piston is a little discolored. It's only a reaction to the heat and doesn't mean a thing. Using abrasives to remove it will only throw a mighty close tolerance out of whack and louse up things—but good.

EASY . . . HERCULES . . . EASY

Ease off on the muscle juice when you tighten that pan-headed machine screw into the stock of your M79 grenade launcher. Too much power and you'll end up with what you see here —a split stock. Just run it up until it's snug . . . then give it about 1/8 of a turn with your combination wrench . . . and you're in business.



FIREPOWER

IF IT MOVES...

YOU CAN SHOOT IT

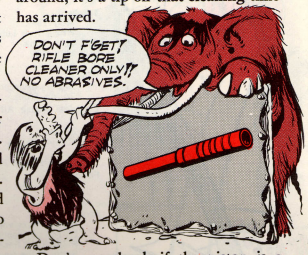
That's good advice—'specially when it comes to the gas piston on both the M14 rifle and M60 machine gun.

The piston on both of these 7.62-mm weapons is made of special rust-resisting metals, and the piston is best left alone unless your M14 or M60 comes up with a short recoil or acts a mite sluggish.

So don't pick up the habit of disassembling and cleaning the gas cylinder everytime you're cleaning your piece. Learn to leave well enough alone and save the wear and tear on your weapon.

The fastest—and easiest — way to check your gas cylinder piston action is to swing your weapon through an arc from the ground to the sky — and listen.

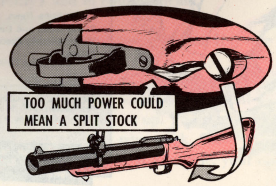
If you hear the piston moving back and forth under its own weight, it's clean enough—so hands off. Natch, if you don't hear the piston sliding around, it's a tip off that cleaning time has arrived.



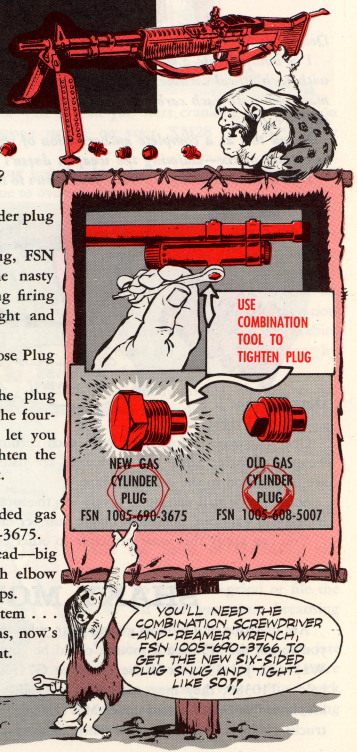
Don't get shook if the piston is a little discolored. It's only a reaction to the heat and doesn't mean a thing. Using abrasives to remove it will only throw a mighty close tolerance out of whack and louse up things—but good.

EASY . . . HERCULES . . . EASY

Ease off on the muscle juice when you tighten that pan-headed machine screw into the stock of your M79 grenade launcher. Too much power and you'll end up with what you see here —a split stock. Just run it up until it's snug . . . then give it about 1/8 of a turn with your combination wrench . . . and you're in business.



NOW. . . USE ELBOW GREASE



How are 'ya fixed for plugs?

Lost any lately?

Like f'rinstance the gas cylinder plug on the M60 machine gun.

'Pears like the original plug, FSN 1005-608-5007, developed the nasty habit of becoming loose during firing —some even gave up the fight and dropped out altogether.

Well, rest easy . . . the "Loose Plug Caper" has been solved.

The wrench surface on the plug turned out to be the culprit. The four-sided head was too small to let you apply enough pressure to tighten the plug so that it would stay put.

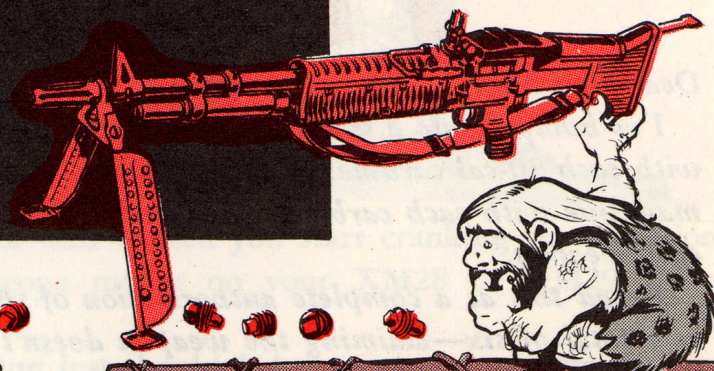
The solution?

The newly-designed six-sided gas cylinder plug, FSN 1005-690-3675.

This one's got a bigger head—big enough to let you use enough elbow grease to lock-up shop for keeps.

The latest one's a stocked item . . . so, if you've got plug problems, now's the time to order a replacement.

NOW... USE ELBOW GREASE



How are 'ya fixed for plugs?

Lost any lately?

Like f'rinstance the gas cylinder plug on the M60 machine gun.

'Pears like the original plug, FSN 1005-608-5007, developed the nasty habit of becoming loose during firing —some even gave up the fight and dropped out altogether.

Well, rest easy . . . the "Loose Plug Caper" has been solved.

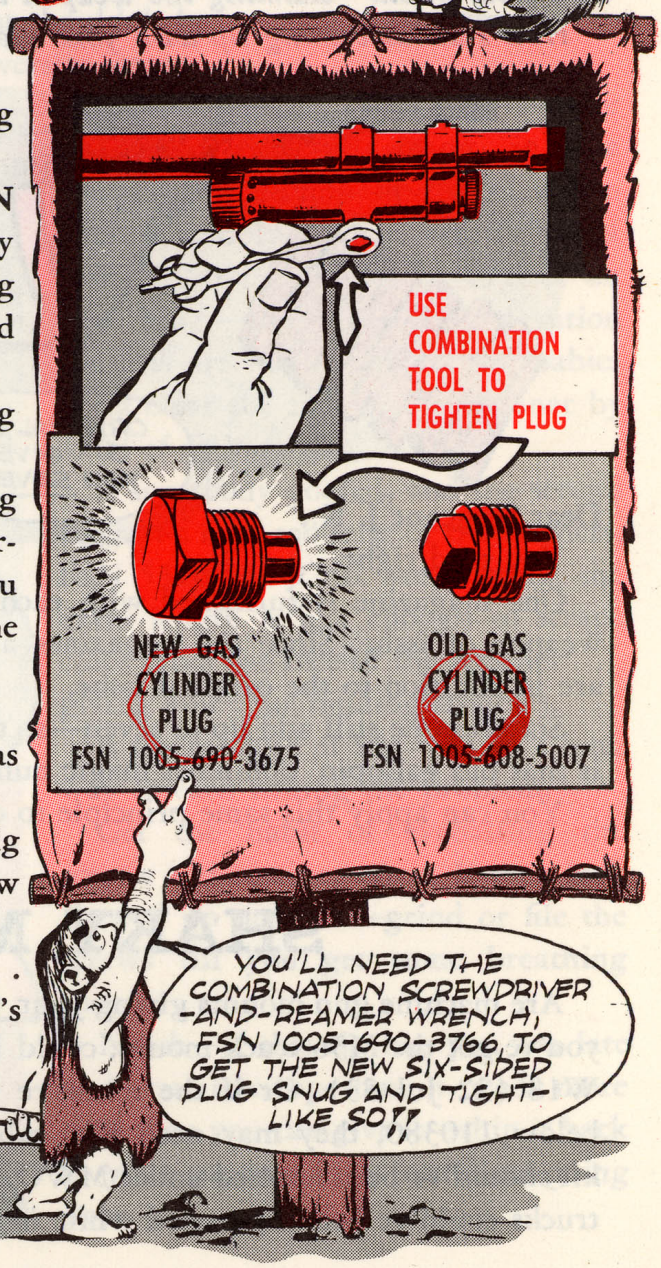
The wrench surface on the plug turned out to be the culprit. The four-sided head was too small to let you apply enough pressure to tighten the plug so that it would stay put.

The solution?

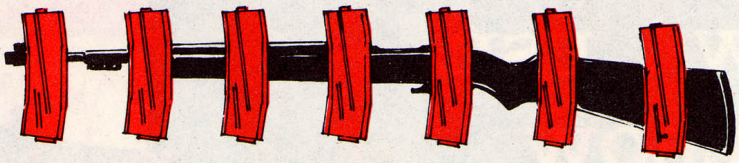
The newly-designed six-sided gas cylinder plug, FSN 1005-690-3675.

This one's got a bigger head—big enough to let you use enough elbow grease to lock-up shop for keeps.

The latest one's a stocked item . . . so, if you've got plug problems, now's the time to order a replacement.



SEVEN'S THE NUMBER



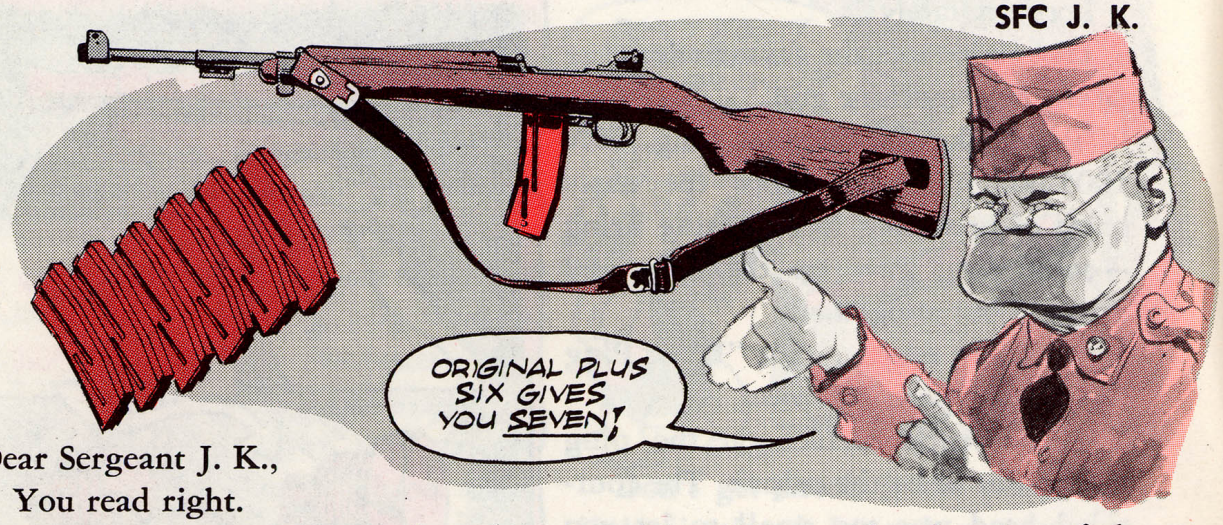
Dear Half-Mast,

I've bumped into a small problem on the total amount of magazines allowed with each 30-cal carbine. In ORD 7 SNL B-28 (Jul 57) the FSN indicates one magazine with each carbine. Then under spare parts, it lists six magazines for each weapon.

I read this as a complete authorization of seven magazines, but others see it as a total of six—claiming the weapon doesn't include a magazine.

How's about coming up with your views to settle this hassle once and for all.

SFC J. K.



Dear Sergeant J. K.,

You read right.

One magazine is furnished with each carbine. It's considered a part of the weapon of issue. Since six magazines are listed as spare parts allowed—they are in addition to the original issue.

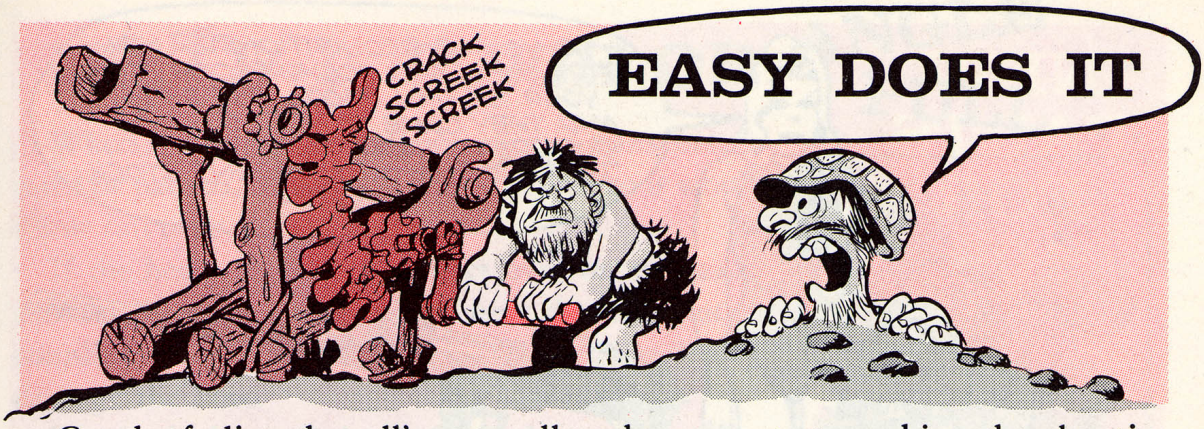
Six plus one still add up to seven—so the total quantity of magazines allowed is that old gallopin' dominoes magic number of seven.

You can apply this same principle to other equipment, too.

Half-Mast

SHAKY MOUNTS

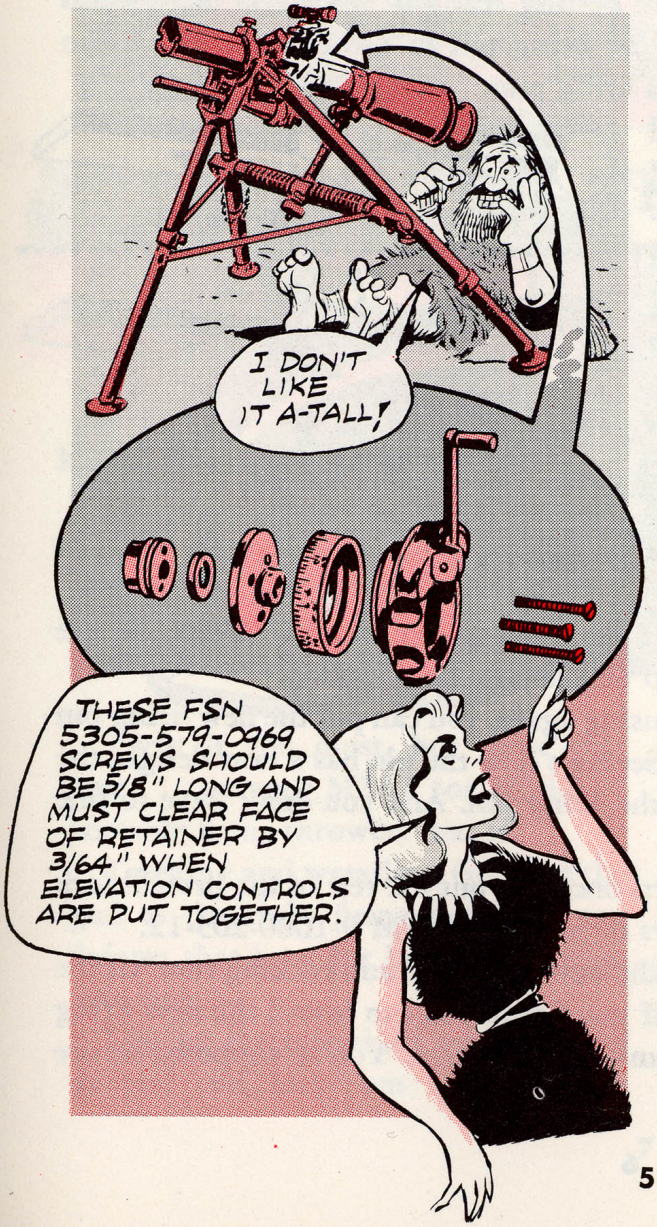
Are machine gun mounts giving your wheeled rigs, and you, the shakes? If you've got the M36 truck mount, could be you need to apply MWO Ord A55-W18 (22 Jul 53). Or if the trucks're G742-series Reos with serial numbers below 110380, they may need Kit, cab reinforcing, FSN 2510-570-1619. The kit should've been applied under MWO Ord G742-W2 (2 Jun 52), but your trucks could've been by-passed while in storage.



Get the feeling that all's not well—when you start cranking the elevation handle on the XM117 telescope mount on your XM28 or XM29 Davy Crockett shooting iron?

Like the grinding and binding just shouldn't be . . . you're so right.

Could be you're in a stew due to oversize screws.



If that's the case, check out the three pan-headed screws sitting in the scooped out section of the elevation knob assembly. These screws, FSN 5305-579-0969, should be 5/8 of an inch long—and when the elevation controls are put together these babies gotta clear the face of the retainer by 3/64 of an inch.

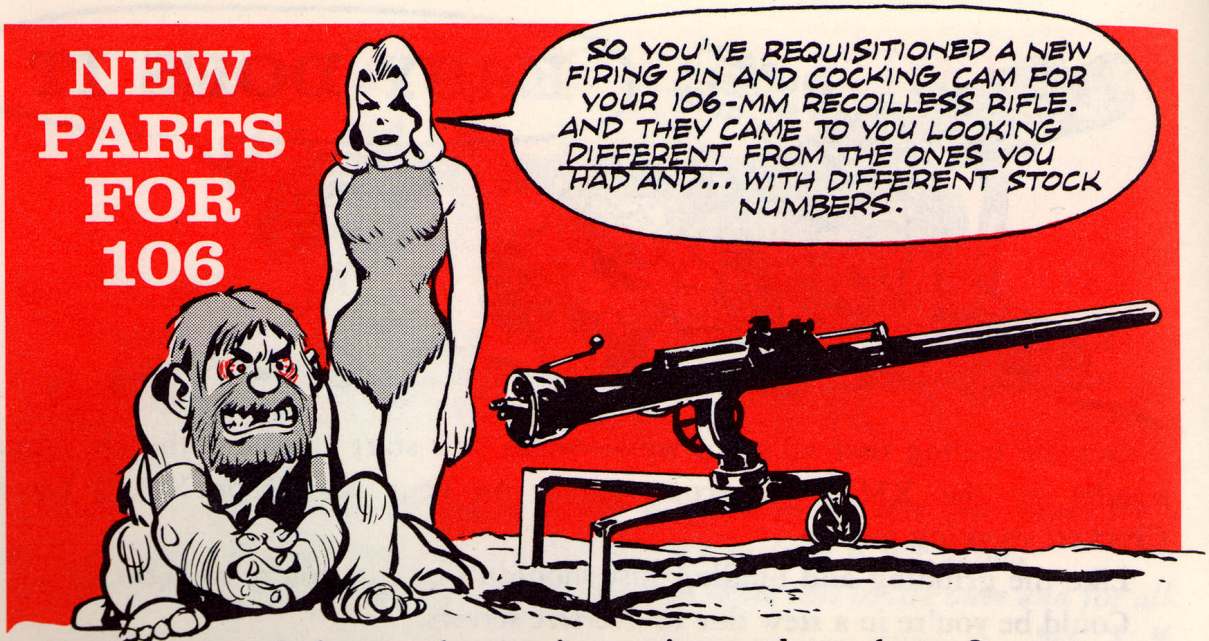
If somebody goofed, and the screws are just a mite too long or the washers, FSN 5310-530-9766, are missing, the extra length is just enough to scrape chips from the face of the retainer . . . giving you your binding troubles.

A liberal dose of PM will go a long way toward licking the problem.

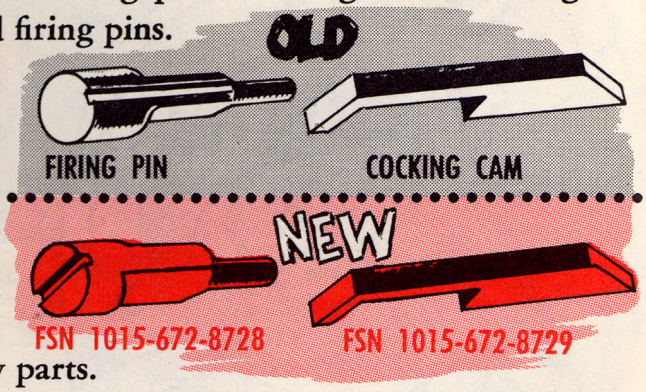
Get the habit of eyeballing the screws and retainer often. If they look chewed up or meet—grind or file the screws till you get some breathing space.

Natch—if this tip hits you too late and your telescope mount needs more help than you can give it—ship it back to your support for a complete going over.

NEW PARTS FOR 106



Don't get in a lather—unless you're getting ready to shave. So many cams were breaking 'cause the firing pins were being put in wrong that the design people 've come up with new cams and firing pins.



When the depots run out of the old firing pins, FSN 1015-305-0755, and the old cocking cams, FSN 1015-608-1273 or FSN 1015-300-5388, they'll send you the latest firing pin, FSN 1015-672-8728, and the cocking cam FSN 1015-672-8729.

Here's the deal on installing the new parts.

First . . . disassemble the breechblock group the way it says in para 65 of TM 9-1000-205-12.

Then . . . take the pin spring out of the firing-pin-housing assembly and toss away the pin spring.

Next . . . have your support unit get rid of the part number 7309888 on the firing-pin-housing assembly and stamp on the number 8766068.

Once you get your hands on the housing again, you can put the new firing pin and cocking cam in the breechblock. Seeing's how the pin has a new design, the cocking cam'll work on either side of the firing pin. And you don't have to line up the cam in any special way.

You're all set to try out the new parts once you put the rest of the breechblock parts where they belong the way it says in para 65 of TM 9-1000-205-12.

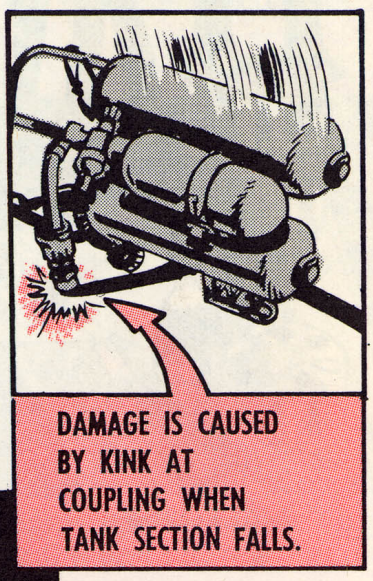
By the incidentally—you don't get the new firing pin and cocking cam 'til the old ones are used up, and it's no dice if you figure you can install the new firing pin and leave in the old cocking cam—or vice versa. You're supposed to use both new parts together.

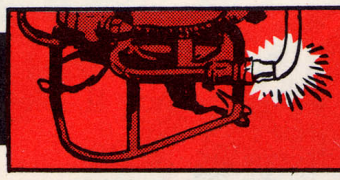
NO TILT, PINCH OR ANGLE PULL . . .

When the portable flame thrower is transported, toted or parked, be sure it's firmly braced so it won't tilt or fall over on the gun hose.

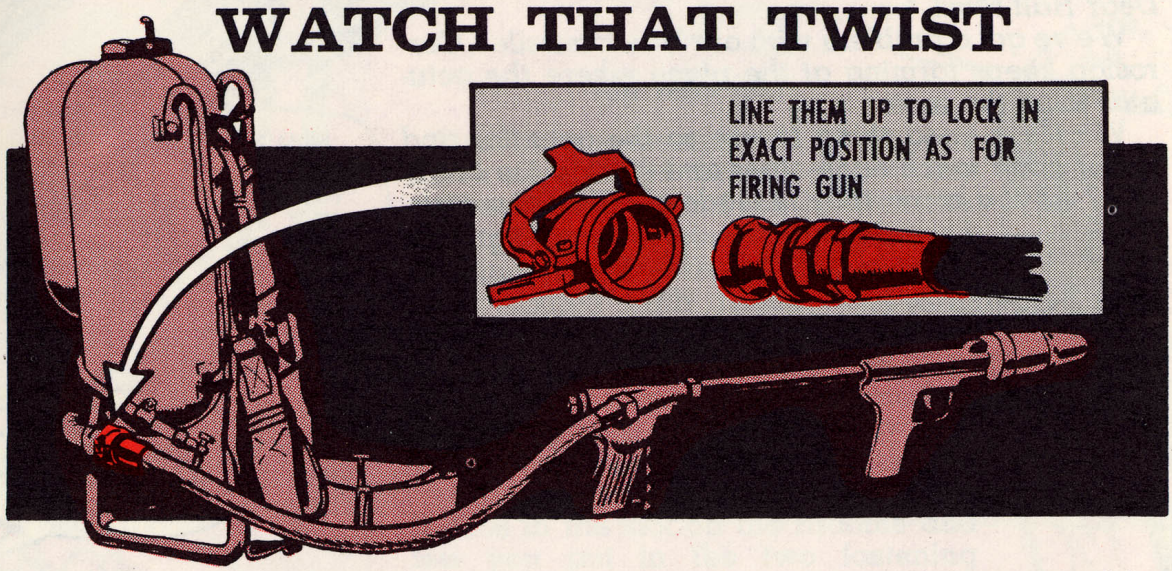
If the heavy tank section goes over on the hose, the hose'll suffer a severe kink near the tank outlet coupling. And that kind of a bind will seriously damage the hose.

It's also bad to pull the hose at a sharp angle (like when you park the gun itself on top of the tanks). This can deform the hose, and weaken the steel reinforcing wire.





WATCH THAT TWIST



Twist if you must, but spare that hose . . . on your M2A1 (or M2A1-7) portable flame thrower, that is.

Twisting and wrestling (to force the gun to the right firing position) can deform that hose for keeps. So, please take care.

Line up the assembled gun and hose so you can lock 'em to the flame thrower's tank in the exact position they must be in when you fire the gun.

Also, when you're locking the hose to the tank be sure to press the hose coupling as far as it'll go into the tank's coupling, and then close the two coupling cams.

Change 1, 6 Aug 62, to TM 3-1040-204-10, has this no-twist warning.

HAWK NOTES

GAA IS THE WAY

Dear Half-Mast,

We've got a problem with our Hawk missiles. Corrosion keeps forming at the place where the actuator joins the motor.

What's a good thing to use so the actuator and motor don't touch each other and so stop the corrosion? As you know, they're made of different metals.

MSgt S. I.

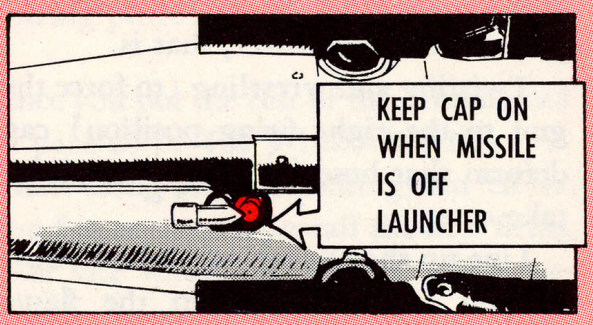
Dear Sergenat S. I.,

I'd use GAA, the kind that goes under MIL-G-10924. FSN 9150-248-3476 will get you a 1-lb. can. Don't put more'n a thin smear on.

Half-Mast

CAP IT — WHEN

That plastic dust cap is just where it belongs when your Hawk missile is off the launcher — on the hydraulic exhaust port. The idea is to keep dust, dirt and what-have-you out of the port. And the cap stays on when the missile is fired.



HAWK NOTES

GAA IS THE WAY

Dear Half-Mast,

We've got a problem with our Hawk missiles. Corrosion keeps forming at the place where the actuator joins the motor.

What's a good thing to use so the actuator and motor don't touch each other and so stop the corrosion? As you know, they're made of different metals.

MSgt S. I.

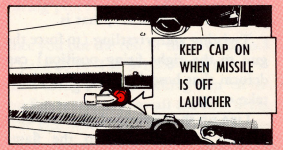
Dear Sergeant S. I.,

I'd use GAA, the kind that goes under MIL-G-10924. FSN 9150-248-3476 will get you a 1-lb. can. Don't put more'n a thin smear on.

Half-Mast

CAP IT — WHEN

That plastic dust cap is just where it belongs when your Hawk missile is off the launcher — on the hydraulic exhaust port. The idea is to keep dust, dirt and what-have-you out of the port. And the cap stays on when the missile is fired.



CAN'T BE DONE — YET

Dear Half-Mast,

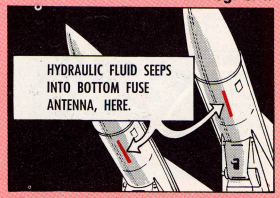
Is there any way we can drain the hydraulic lines in our Hawk missiles after we've made a performance check? We find that the hydraulic fluid collects along the bottom fuze antenna.

MSgt S. I.

Dear Sergeant S. I.,

I'm afraid you're out of luck on this score, at least for awhile yet. Paper, pencils and slide rules are getting a workout right now to see if it's possible to get rid of leaks, or maybe cut them way down, so the stuff doesn't find a home on the bottom of the fuze antenna.

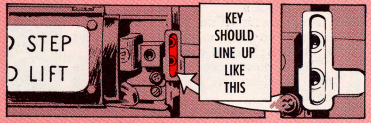
I guess you know what paragraph 57c (23) of change 3 to TM 9-1410-500-12 says about normal seepage within the guidance section — seepage that builds up between performance checks. If you haven't read that paragraph lately, it sure wouldn't hurt to take a look the first chance you get.



Half-Mast

YOU NEED HELP

Here's the scene as you work on your Hawk missile. The threads on both the guidance section and the radome are clean . . . you're using new preformed packing (FSN 1420-767-9037) that's been coated with rubber lubricant (FSN 9150-250-0926) . . . you've gone to the +200-in-lbs you're allowed above the normal 1600-in-lbs for torquing the radome . . . and you know that your torque wrench is accurate. But the radome lock key won't line up so it goes in the slot on the radome and lets you put in the two fastening screws at the same time. What now? Call in your support unit 'cause you've done all you can.



CAN'T BE DONE — YET

Dear Half-Mast,

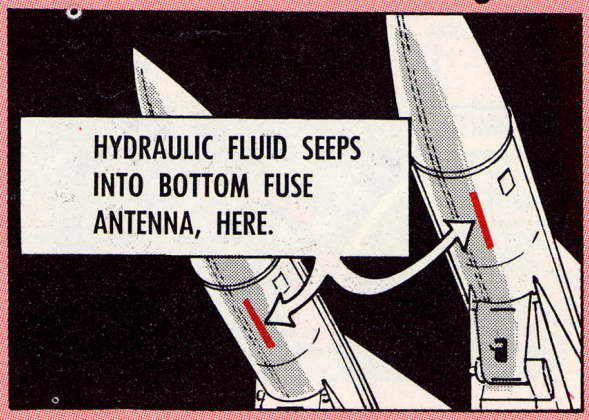
Is there any way we can drain the hydraulic lines in our Hawk missiles after we've made a performance check? We find that the hydraulic fluid collects along the bottom fuze antenna.

MSgt S. I.

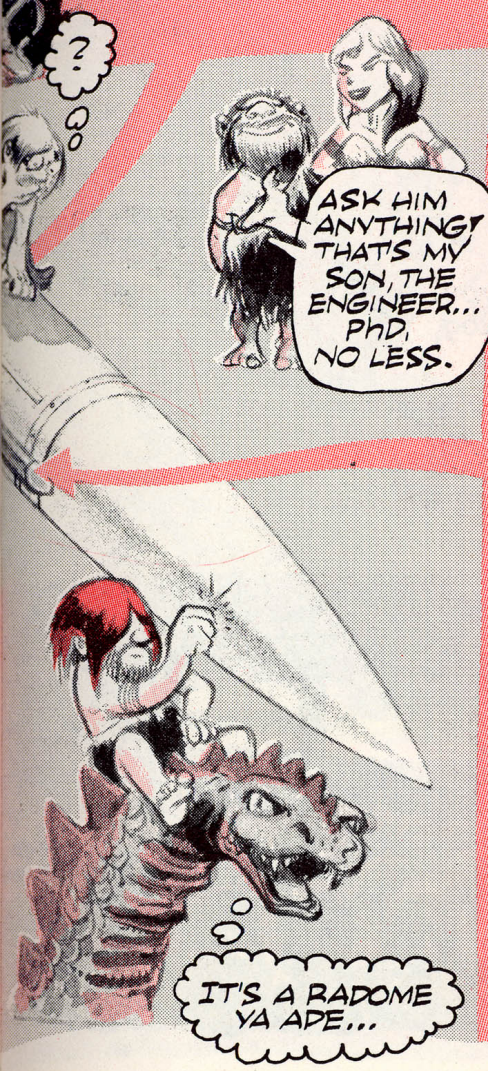
Dear Sergeant S. I.,

I'm afraid you're out of luck on this score, at least for awhile yet. Paper, pencils and slide rules are getting a workout right now to see if it's possible to get rid of leaks, or maybe cut them way down, so the stuff doesn't find a home on the bottom of the fuze antenna.

I guess you know what paragraph 57c (23) of change 3 to TM 9-1410-500-12 says about normal seepage within the guidance section — seepage that builds up between performance checks. If you haven't read that paragraph lately, it sure wouldn't hurt to take a look the first chance you get.

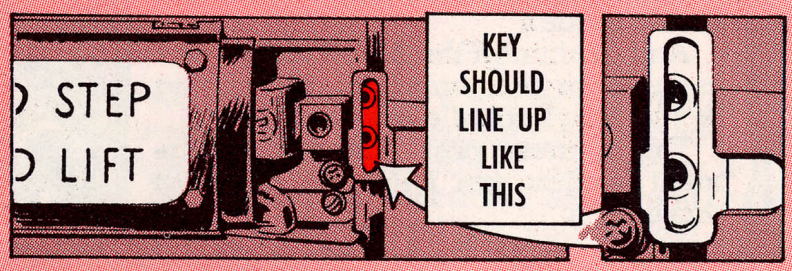


Half-Mast



YOU NEED HELP

Here's the scene as you work on your Hawk missile. The threads on both the guidance section and the radome are clean . . . you're using new preformed packing (FSN 1420-767-9037) that's been coated with rubber lubricant (FSN 9150-250-0926) . . . you've gone to the +200-in-lbs you're allowed above the normal 1600-in-lbs for torqing the radome . . . and you know that your torque wrench is accurate. But the radome lock key won't line up so it goes in the slot on the radome and lets you put in the two fastening screws at the same time. What now? Call in your support unit 'cause you've done all you can.

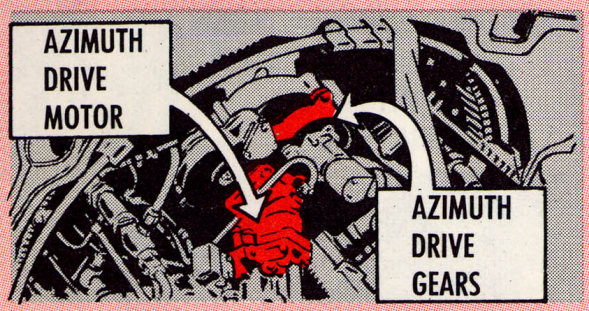


OIL IS NEEDED

The way the gears and motor of the azimuth drive assembly on some Hawk launchers are breaking down before their time you'd think maybe it has something to do with lubrication. And it does, sure enough.

The motor pump assembly just doesn't get enough lube the way things're set up.

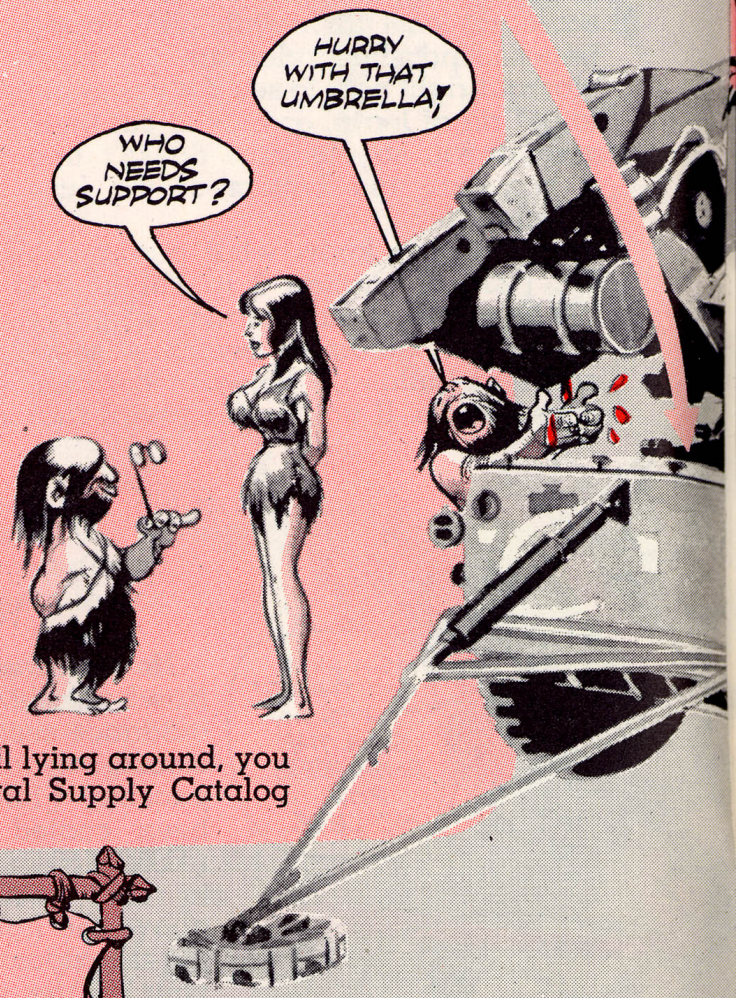
It takes a little doing on your part to get oil to the gears and motor — but it's worth the effort.



What you do is raise the launcher hatch assembly the way it tells you in TM 9-1440-500-12/1. (Don't forget to put in the boom support safety rod.) Then remove the fill plug from the motor pump assembly gear case and fill to capacity with aircraft gear lubricating oil, MIL-L-6086, FSN 9150-223-4130.

The oil level wants to be checked every 100 hours of operation. If it's low, put more oil in.

In case you don't have any of the oil lying around, you can find a 5-gal pail listed in Federal Supply Catalog C4-1 (SM 10-1-C4-1), dated Feb 61.

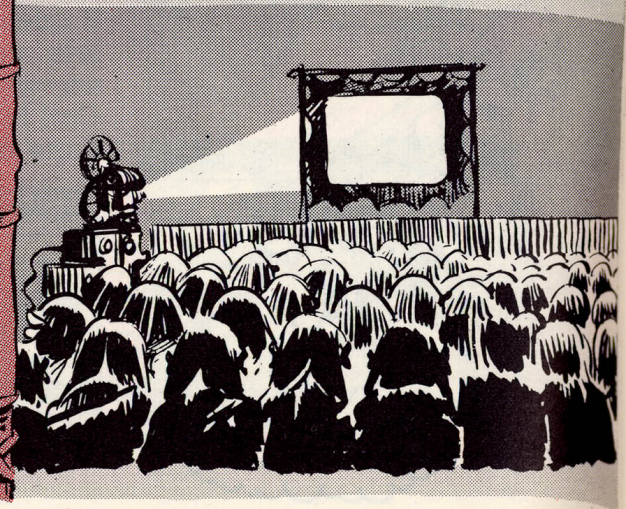


HAWK WATCHERS

For a visual briefing on daily and weekly checks and adjustments on the Hawk launcher take a look at Training Film 44-2893. There's also Training Film 44-2891 which covers capabilities and operation of the Hawk loader.

And Training Film 9-3118 shows procedures for safe handling and testing of the Hawk missile system.

The nearest post film and equipment section can help you out with these TF's.

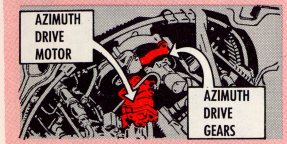


OIL IS NEEDED

The way the gears and motor of the azimuth drive assembly on some Hawk launchers are breaking down before their time you'd think maybe it has something to do with lubrication. And it does, sure enough.

The motor pump assembly just doesn't get enough lube the way things're set up.

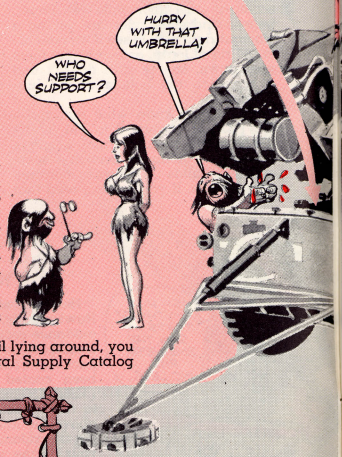
It takes a little doing on your part to get oil to the gears and motor — but it's worth the effort.



What you do is raise the launcher hatch assembly the way it tells you in TM 9-1440-500-12/1. (Don't forget to put in the boom support safety rod.) Then remove the fill plug from the motor pump assembly gear case and fill to capacity with aircraft gear lubricating oil, MIL-L-6086, FSN 9150-223-4130.

The oil level wants to be checked every 100 hours of operation. If it's low, put more oil in.

In case you don't have any of the oil lying around, you can find a 5-gal pail listed in Federal Supply Catalog C4-1 (SM 10-1-C4-1), dated Feb 61.

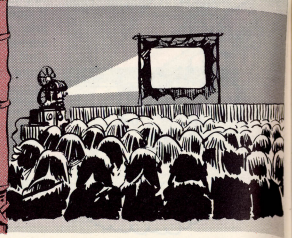


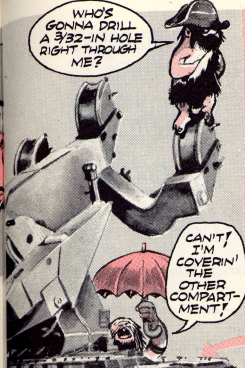
HAWK WATCHERS

For a visual briefing on daily and weekly checks and adjustments on the Hawk launcher take a look at Training Film 44-2893. There's also Training Film 44-2891 which covers capabilities and operation of the Hawk loader.

And Training Film 9-3118 shows procedures for safe handling and testing of the Hawk missile system.

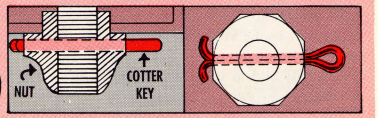
The nearest post film and equipment section can help you out with these TF's.

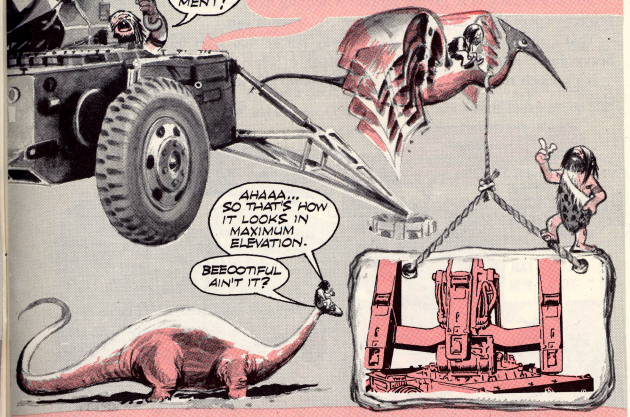




END TO NUTTY PROBLEM

If there're some things that don't belong in the front and rear compartments on your Hawk launcher, they're the lock nuts used to hold the fasteners on the compartment covers. But those nuts have a habit of becoming loose and falling into the compartments. You won't have the problem, tho, if you get a 3/32-in hole drilled in each nut and threaded pin. Then slip a cotter key in the hole.



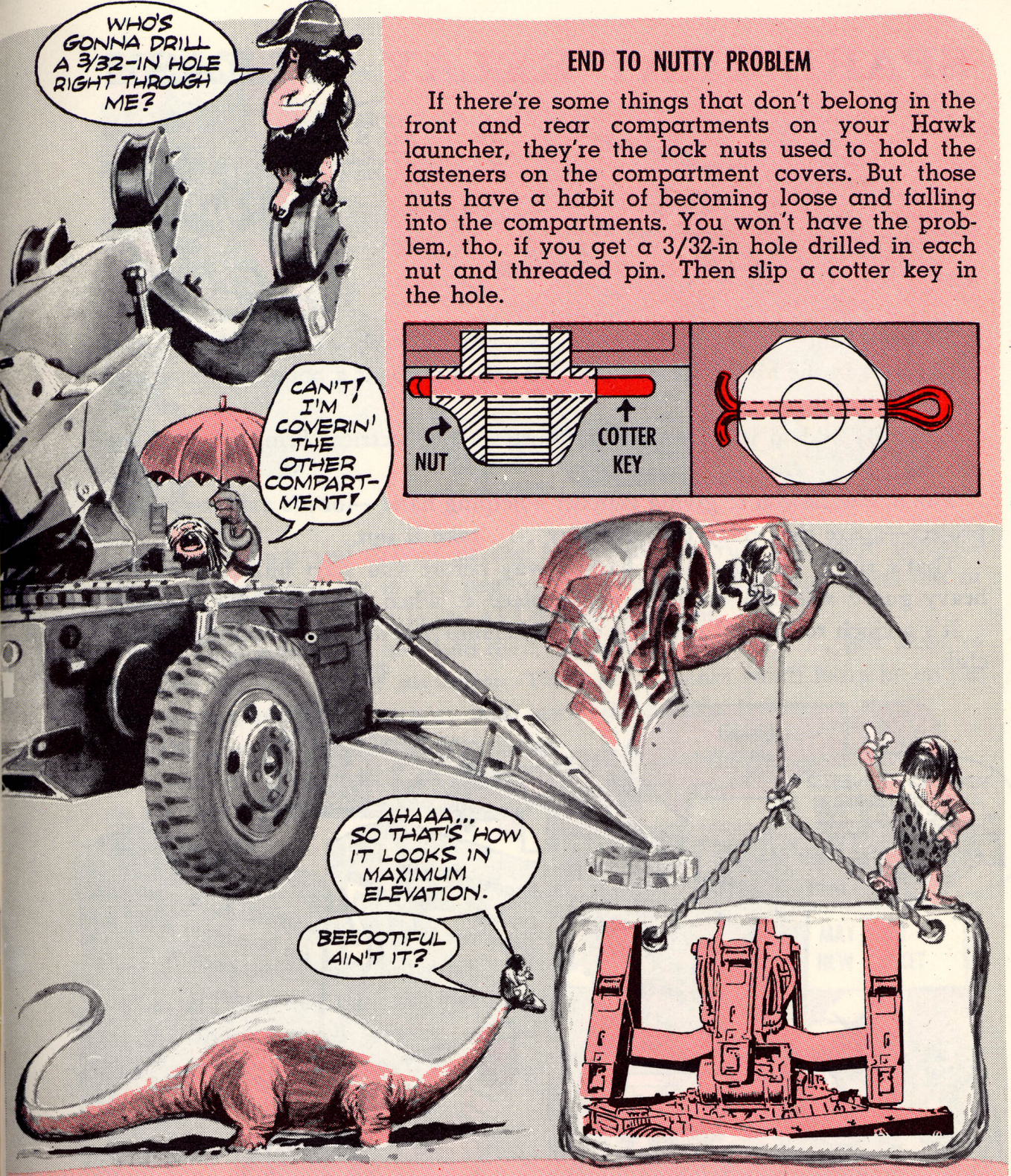


UP AND OUT

This is how your Hawk launcher wants to look after it has rained and before you start your daily check. The boom should be at maximum elevation and the front and rear compartment covers closed. That way . . . any water that's in the boom will run off without getting into the electronic equipment under the covers. Once all the water has dripped or poured out, you can get going on the daily check.

END TO NUTTY PROBLEM

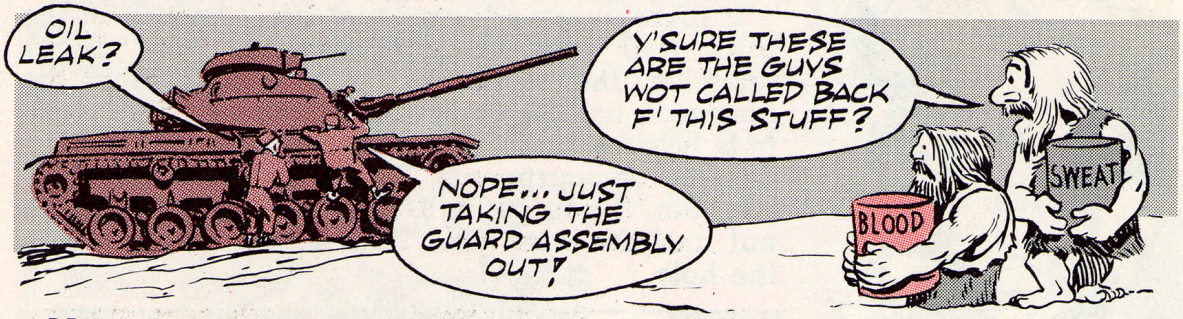
If there're some things that don't belong in the front and rear compartments on your Hawk launcher, they're the lock nuts used to hold the fasteners on the compartment covers. But those nuts have a habit of becoming loose and falling into the compartments. You won't have the problem, tho, if you get a 3/32-in hole drilled in each nut and threaded pin. Then slip a cotter key in the hole.



UP AND OUT

This is how your Hawk launcher wants to look after it has rained and before you start your daily check. The boom should be at maximum elevation and the front and rear compartment covers closed. That way . . . any water that's in the boom will run off without getting into the electronic equipment under the covers. Once all the water has dripped or poured out, you can get going on the daily check.

SPARE THAT RELAY - PLEASE



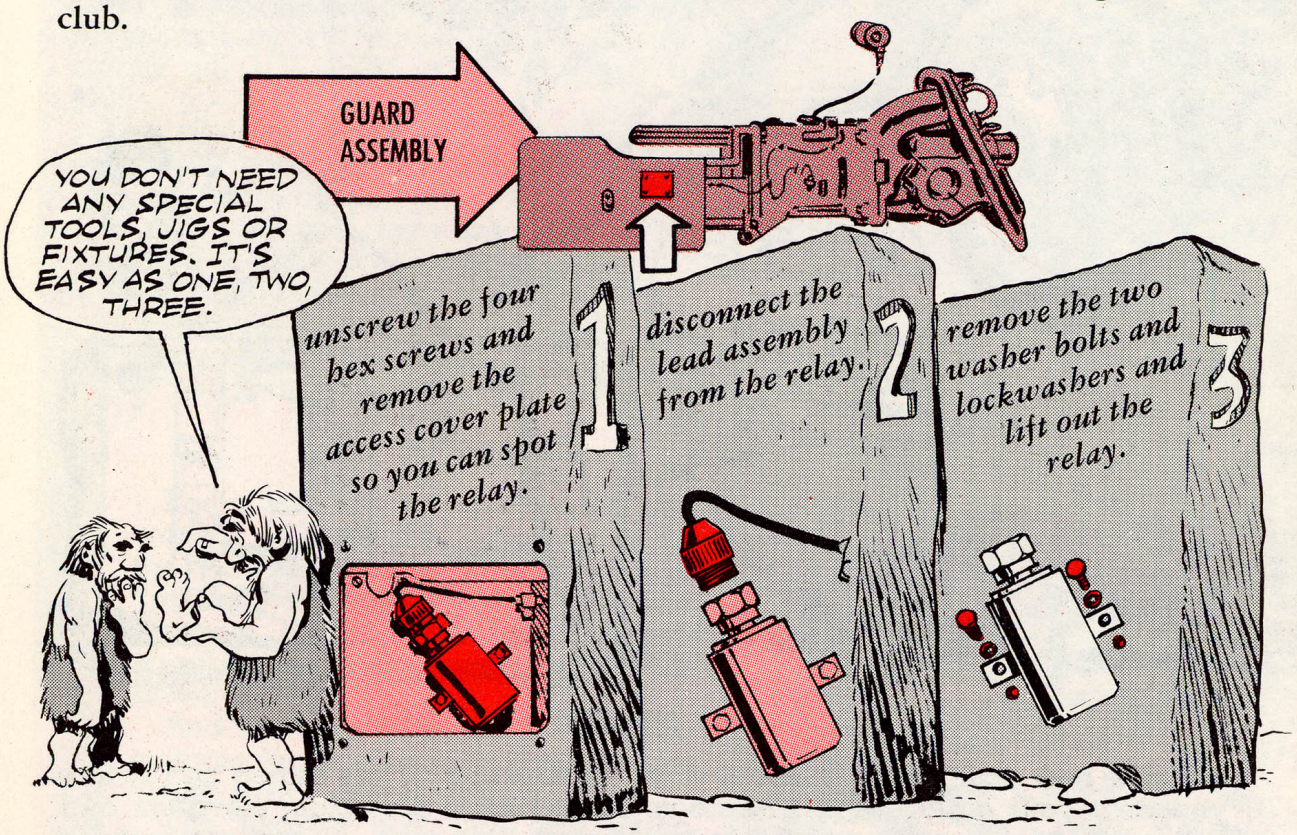
No argument—removing the gunner's guard assembly on the M116 105-mm gun mount in the M60 tank is a job that calls for about a pound of blood and sweat.

But, why add to your troubles by busting the electrical firing relay in the process?

The next time you're giving support a helping hand—or it's a do-it-yourself project—spare that relay the easy way . . . take it out.

That's right. Get it out of harm's way before you start bull-lugging the heavy guard assembly around—and replace it when the big job's finished.

It's a cinch to do and gets you a membership pass into the "thinking man's" club.



All that remains then is to keep the relay handy so you'll remember to reverse the one, two, three steps and replace and connect the relay—once you've got the guard reassembled.

A FEEL TEST

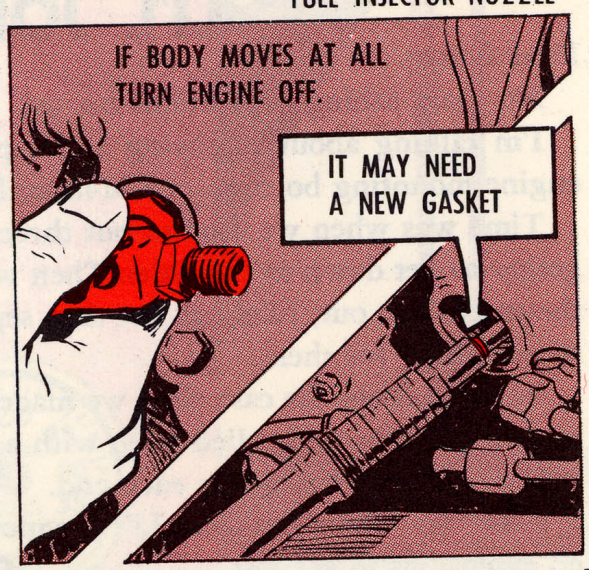
You mechanics and drivers of the M60 tank can run into more troubles than you bargained for if you neglect to make this "on-the-spot" feel test of those fuel injector nozzles in its AVDS 1790-2 engine.

Some keep poppin' up here and there with **loose** nozzles . . . just seem to sneak by the wary eye of inspection. These are the ones you'll hafta be on the look out for, and try to catch up with before the damage is done.

FUEL INJECTOR NOZZLE

Right **now** is the time to check for loose nozzles. Then, from now on, you do the feel test at each Q-service. It's done like this—

Start up the engine . . . grab hold of the end of the holder body on the nozzle assembly with your hand (do this while the engine's still cool). If you detect even the slightest movement in the body, turn the engine off and don't start it up again until your support unit has checked it out.



When support pulls the nozzle out, they'll probably find it needs a new nozzle gasket (FSN 2910-678-5369) or, maybe the nozzle gasket's missing.

When a gasket's left out, a gap is created, twixt the seat in the cylinder and nozzle tip. The gap allows the nozzle to move up and down. It's not long till the nozzle and cylinder head threads have gone to pot from the thumping they take and from the extreme heat of leaky combustion gases.

TANK HUB LEAKS

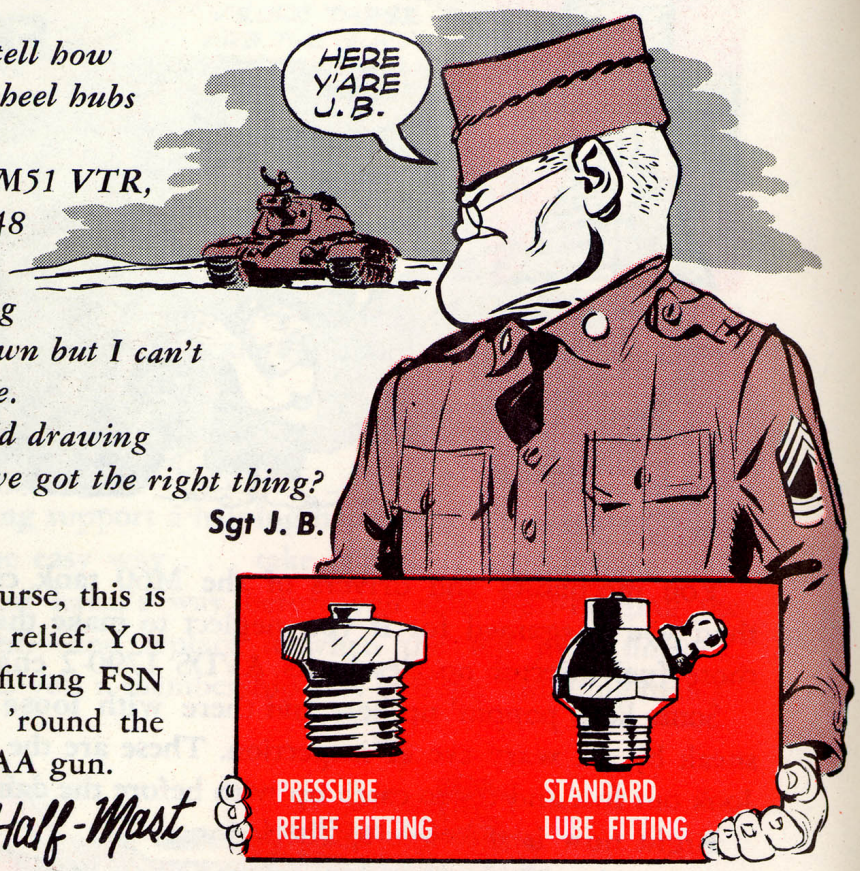
Dear Half-Mast,

In PS 108 page 15 you tell how to cure lube leaks in the wheel hubs for the M53 SP gun, the M55 SP howitzer, the M51 VTR, and all the tanks in the M48 and M103 families.

The pressure relief fitting FSN 4730-542-5683 is shown but I can't make out what it looks like.

Could you give us a good drawing of this so we can be sure we got the right thing?

Sgt J. B.



Dear Sergeant J. B.,

Glad to oblige. But o'course, this is only for lubricant **pressure** relief. You still need a standard lube fitting FSN 4730-287-5660 (half way 'round the hub) for use with your GAA gun.

Half-Mast

LI'L JOE TOOL

Dear Editor,

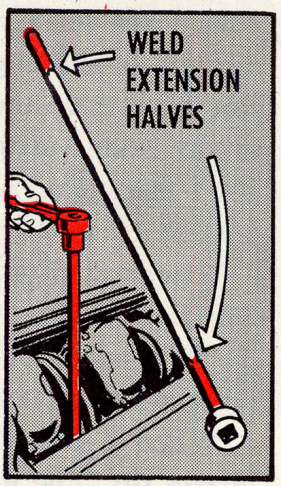
No more fishing expeditions for us!

I'm talking about removing and replacing the auxiliary engine mounting bolts on our M48 tanks.

Time was when we used to put three 12-in extensions together to get down to the bolts. Then when you tried to lift the extensions out, likely as not they separated and you had to go fishing for them.

But that is not the case since we made up this handy 40-in tool from ½-in cold rolled steel, with a spare 6-in extension cut in half and welded on each end.

Now, when we turn those Li'l Joe mounting bolts there're no extensions to get lost.



CWO Robert Crabbe
Camp Drum, N. Y.

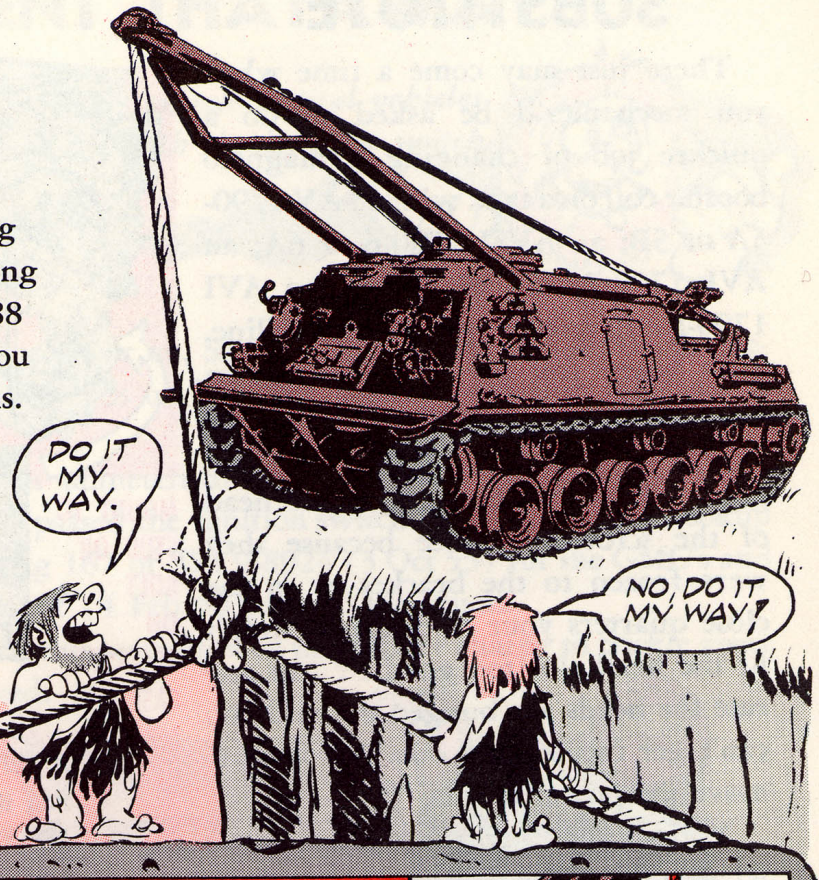
(Ed Note—Looks like a good time and trouble saver. Just be sure it's a condemned extension that gets the surgery . . . wouldn't want your tools to look like something they shouldn't.)

M88 SMOOTHER HOISTIN'

It's easy to do the wrong thing when you're operating the hoist winch of the M88 TRV . . . for sure when you get two sets of instructions.

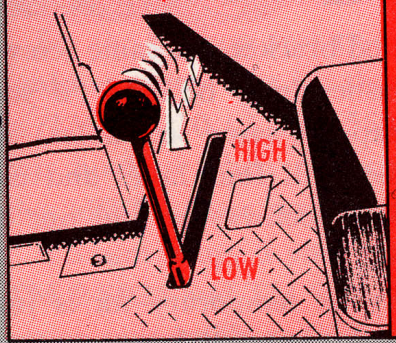
Here're three important points for hoist winch operation.

Have 'em down pat before climbing into the seat again.



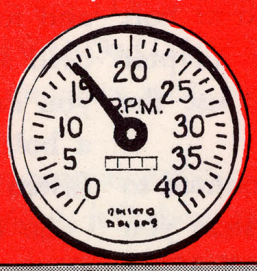
1. Use only low gear range when there's a load on the cable. Low'll give with more power, a smoother pull, and better braking action.

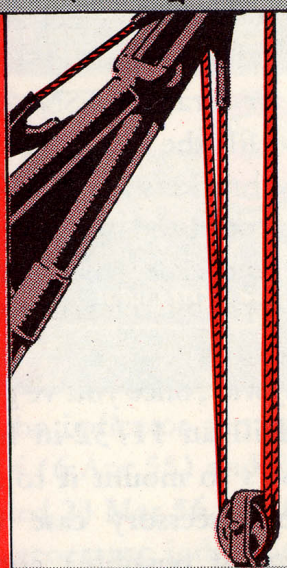
Use high ONLY when there's no load on the cable and you're in a big hurry to reel the cable (in or out) by itself.



2. Keep the engine revved to between 1500-1600 RPM whenever the operating lever is engaged.

If she falls below 1500, or goes above 1600, the innards of the hoist system take a beating. Keep your eye on the tach because the engine governor is set high and will let the RPM run away with you.





3. When hoisting, keep a four-part line threaded thru the sheaves and snatch block . . .

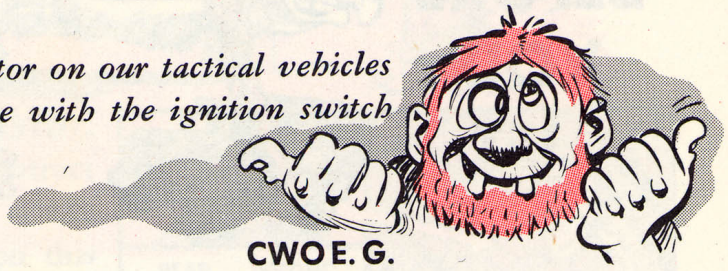
. . . LIFTING WITH A SINGLE-PART LINE LETS THE WINCH TRAVEL TOO FAST AND MAKES IT TOUGH FOR THE BRAKE TO CONTROL IT.

IT WENT THATAWAY

Dear Half-Mast,

Is the battery-generator indicator on our tactical vehicles supposed to show battery voltage with the ignition switch turned OFF?

Some say yes—others say no.



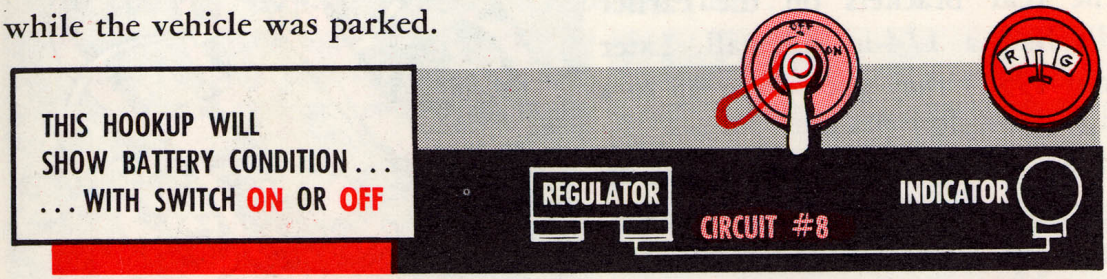
CWO E. G.

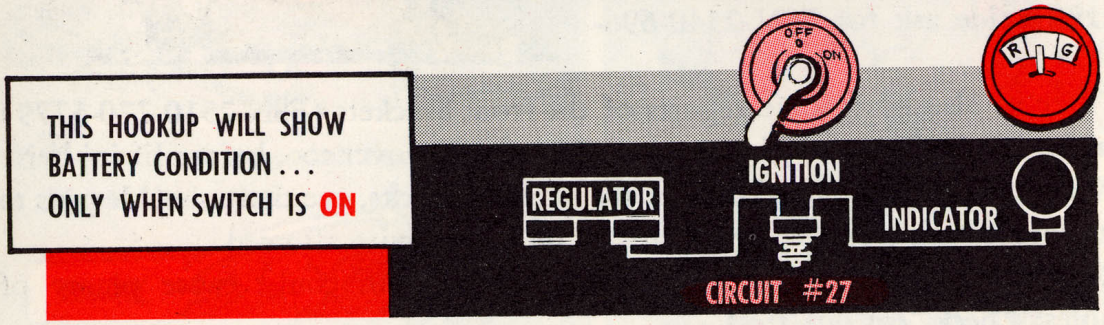
Dear Mr. E. G.,

The answer could be either yes or no, Sir. It will take a check-out on the vehicle to see who's right. It depends on how the battery-generator indicator is wired.

When the switchover from ammeters to indicators was made, some indicators got a wiring hookup that bypassed the ignition switch. You can see this hookup in the wiring diagrams in Fig 167 of TM 9-8024 (3 Oct 55) for the GMC's and Fig 146 of TM 9-2320-206-12 (4 Feb 60) for 10-ton trucks.

But some indicators wired this way allowed the battery charge to trickle away while the vehicle was parked.





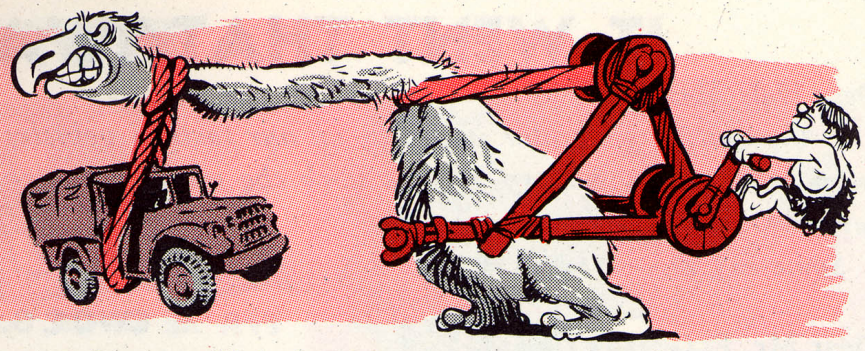
So, the hookup was re-designed to take current to the indicator through the ignition switch like it's shown in Fig 111 of TM 9-8014 (6 Apr 55) and Fig 134 of TM 9-8030 (2 May 55). (MWO Ord G1-W78, dated 23 Mar 56, spelled out this hookup when replacing ammeters with battery-generator indicators. But this MWO's been rescinded.)

To sum it up, if your battery-generator indicator's wired like the diagrams in TM 9-8024 and TM 9-2320-206-12, it'll show the battery condition with the ignition switch ON or OFF.

But if the indicator's wired through the ignition switch (circuit No. 27) it'll show the battery condition only when the ignition switch is ON.

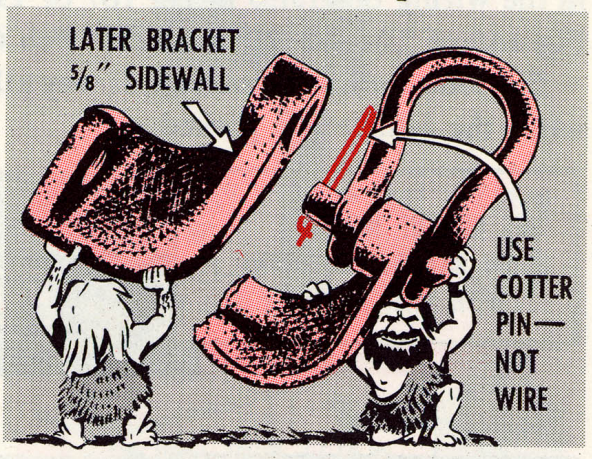
Half-Mast

BEFORE YOU LIFT



There may be times when you'll hafta lift a G741-series, 3/4-ton truck up onto a boxcar, ship, etc. and the lifting sling spelled out in TB 9-210/1 makes the job a bit cumbersome to do.

So you'll want to use your truck's lifting brackets that the shackle and pin hook in to for doing the lift job. OK, but when you do, wind an extra cable (wire rope) thru the bumperettes in the rear if the vehicle was produced prior to 1952 and around the bumper in the front of all the trucks . . . here's why.



The rear brackets on the earlier trucks had a 1/4-in sidewall. Later (about 1951) they got beefed up to a 5/8-in sidewall.

To be sure you've got the beefed-up brackets on the rear, ask for: Bracket, Rear, Left; FSN 2540-696-0250. For the right side ask for FSN 2540-696-0251.

There've also been some reports of the front brackets (FSN 2510-770-5779) breaking. So be sure and give them a careful going over too, before liftin' her.

When checking the brackets out for signs of cracks, eye those shackle pins to make sure there's a cotter key in 'em . . . no baling wire allowed.

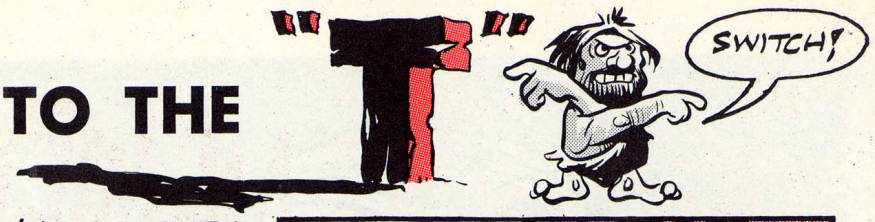
Remember, a broken bracket or loose shackle pin could cause plenty of troubles. Check 'em out **first.**

PRESSURE DATA

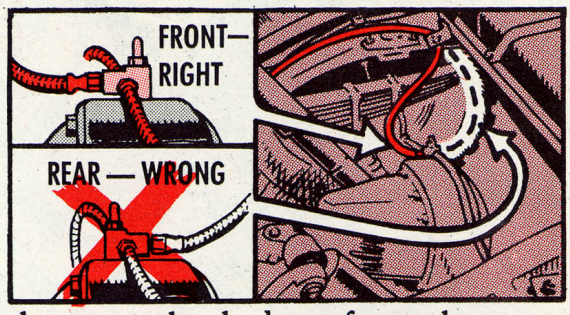
Do you have any M37B1, 3/4-ton trucks in your motor park? If so, take a glance at their instrument panel data plate and see what it says about the tire pressure.

The correct cross-country and highway tire pressure for this truck is 40 pounds; just like TM 9-8030 says. Any instruction or data plate that says otherwise should be changed to agree with the TM; and TB 9-2320-212-20/3 (14 Aug 62) gives you the authorization to make the change.

RIGHT - - - TO THE



If any of your 3/4-ton, M37B1, trucks show up under DA Contract Number DA-20-018-22821 . . . the dash data plate will clue you on this . . . take the time to check-see how the flexible hose running to the rear brake lines is hooked up.

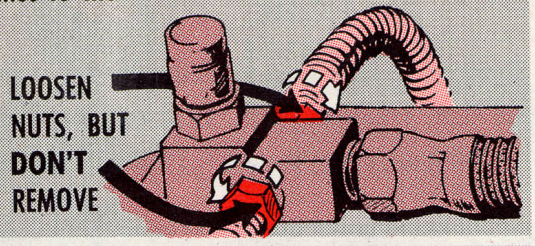


On some of these vehicles, the brake hose was hooked up from the wrong side of the rear axle . . . from the rear instead of the front side like Fig 187 in TM 9-8030 (May 55) shows.

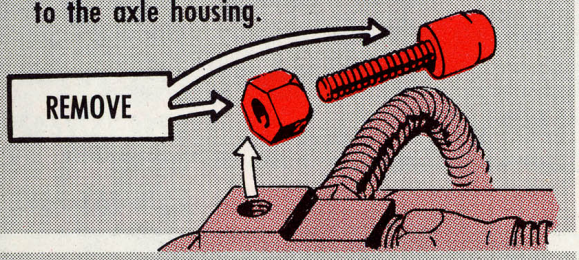
When connected up from the rear, the hose may rub on the fuel tank or may kink . . . in either case the life of the hose is jeopardized.

So, you can make the switcheroo real easy, just . . .

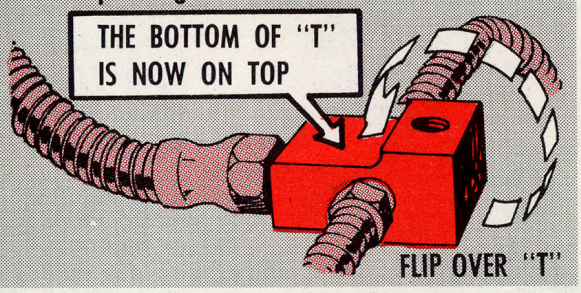
1. Loosen, but don't remove, the two, 1/4-in inverted flared nuts connecting the axle brake lines to the "T".



2. Remove the vent-type bolt that holds the "T" to the axle housing.

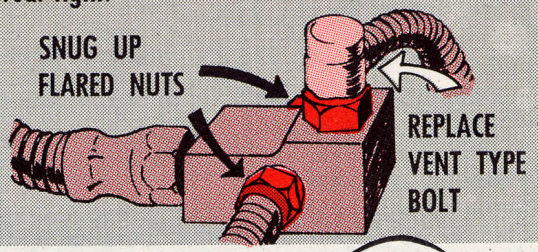


3. Just flip the "T" over (180°) while at the same time pivoting the flex brake hose.

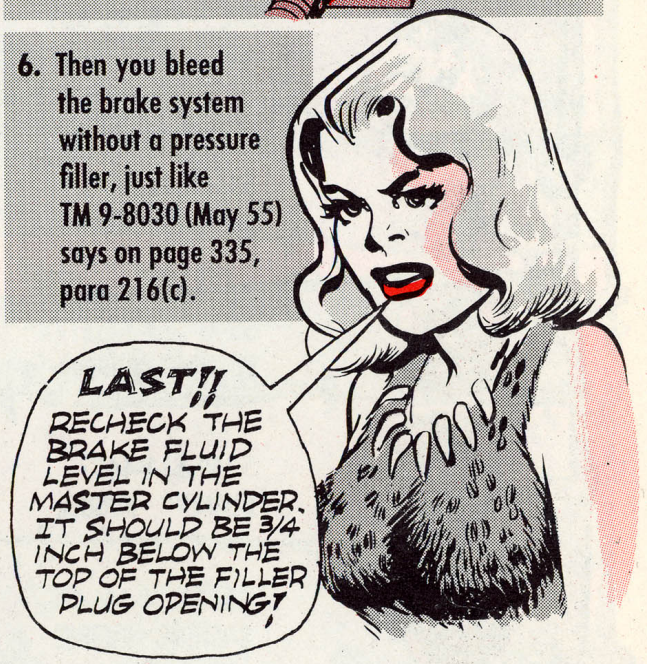


4. Reinstall the vent bolt.

5. Snug the flared nuts back up again, but not real tight.



6. Then you bleed the brake system without a pressure filler, just like TM 9-8030 (May 55) says on page 335, para 216(c).



To help you learn what's what with your **Bendix waterproof electrical connector repair kit,** here's a chart that will help you get the replacement parts you need.

The Bendix kit carried an old Ordnance Stock Number (H020-5701380) but it now has FSN 5935-570-1380. And SM 9-4-5935-S01 (21 May 62) lists all the items in the kit.

Stockage at organizational level is limited to one Bendix kit per organization regardless of the variety of vehicle types that you support. You can replace any item in the kit, but you have to order separately—you can't reorder the whole kit as one unit.

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5340-641-8645 BUSHING, RUBBER	ORD	7527647 Gland	1	G244-7527647 GLAND 2510-752-7647
5340-514-4455 BUSHING, RUBBER	ORD	7716696 Gland	1	G244-7716696 GLAND 2510-771-6696
5340-514-4457 BUSHING, RUBBER	ORD	7716697 Gland	1	G244-7716697 GLAND 2510-771-6697
5340-514-4454 BUSHING, RUBBER	ORD	7527646 Gland	2	G244-7527646 GLAND 5340-752-7646

To help you learn what's what with your **Bendix waterproof electrical connector repair kit,** here's a chart that will help you get the replacement parts you need.

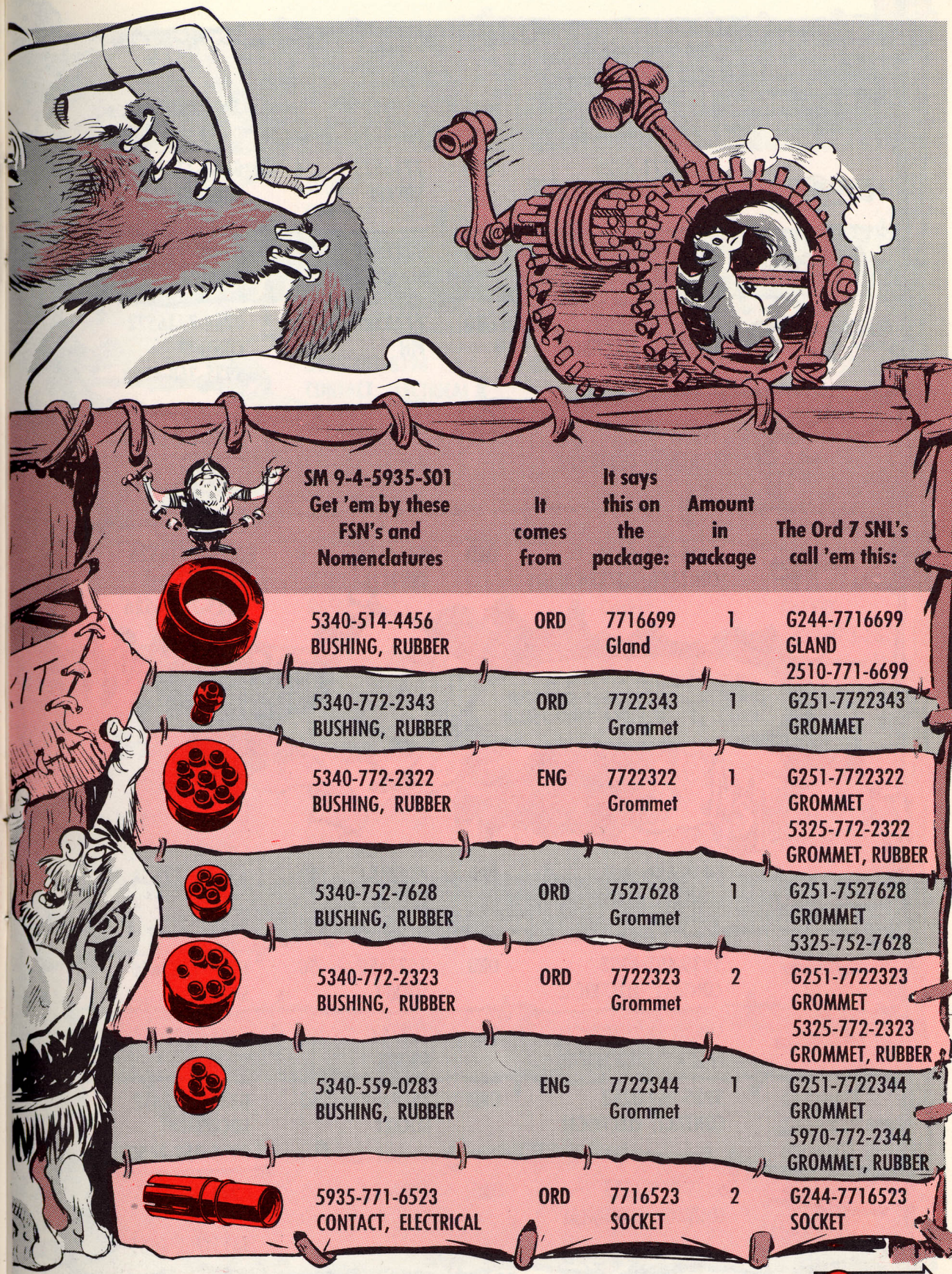
The Bendix kit carried an old Ordnance Stock Number (H020-5701380) but it now has FSN 5935-570-1380. And SM 9-4-5935-S01 (21 May 62) lists all the items in the kit.

Stockage at organizational level is limited to one Bendix kit per organization regardless of the variety of vehicle types that you support. You can replace any item in the kit, but you have to order separately—you can't reorder the whole kit as one unit.

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5340-641-8645 BUSHING, RUBBER	ORD	7527647 Gland	1	G244-7527647 GLAND 2510-752-7647
5340-514-4455 BUSHING, RUBBER	ORD	7716696 Gland	1	G244-7716696 GLAND 2510-771-6696
5340-514-4457 BUSHING, RUBBER	ORD	7716697 Gland	1	G244-7716697 GLAND 2510-771-6697
5340-514-4454 BUSHING, RUBBER	ORD	7527646 Gland	2	G244-7527646 GLAND 5340-752-7646

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5340-514-4456 BUSHING, RUBBER	ORD	7716699 Gland	1	G244-7716699 GLAND 2510-771-6699
5340-772-2343 BUSHING, RUBBER	ORD	7722343 Grommet	1	G251-7722343 GROMMET
5340-772-2322 BUSHING, RUBBER	ENG	7722322 Grommet	1	G251-7722322 GROMMET 5325-772-2322 GROMMET, RUBBER
5340-752-7628 BUSHING, RUBBER	ORD	7527628 Grommet	1	G251-7527628 GROMMET 5325-752-7628
5340-772-2323 BUSHING, RUBBER	ORD	7722323 Grommet	2	G251-7722323 GROMMET 5325-772-2323 GROMMET, RUBBER
5340-559-0283 BUSHING, RUBBER	ENG	7722344 Grommet	1	G251-7722344 GROMMET 5970-772-2344 GROMMET, RUBBER
5935-771-6523 CONTACT, ELECTRICAL	ORD	7716523 SOCKET	2	G244-7716523 SOCKET

MORE



SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5340-514-4456 BUSHING, RUBBER	ORD	7716699 Gland	1	G244-7716699 GLAND 2510-771-6699
5340-772-2343 BUSHING, RUBBER	ORD	7722343 Grommet	1	G251-7722343 GROMMET
5340-772-2322 BUSHING, RUBBER	ENG	7722322 Grommet	1	G251-7722322 GROMMET 5325-772-2322 GROMMET, RUBBER
5340-752-7628 BUSHING, RUBBER	ORD	7527628 Grommet	1	G251-7527628 GROMMET 5325-752-7628
5340-772-2323 BUSHING, RUBBER	ORD	7722323 Grommet	2	G251-7722323 GROMMET 5325-772-2323 GROMMET, RUBBER
5340-559-0283 BUSHING, RUBBER	ENG	7722344 Grommet	1	G251-7722344 GROMMET 5970-772-2344 GROMMET, RUBBER
5935-771-6523 CONTACT, ELECTRICAL	ORD	7716523 SOCKET	2	G244-7716523 SOCKET

PS MORE

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5935-771-6525 CONTACT, ELECTRICAL	ORD	7716525 SOCKET	6	G244-7716525 CONTACT
5935-771-6527 CONTACT, ELECTRICAL	ORD	7716527 SOCKET	8	G244-7716527 SOCKET
5935-368-4852 CONTACT, ELECTRICAL	ORD	7716522 PIN	2	G244-7716522 CONTACT 5935-368-4852 PIN
5935-771-6524 CONTACT, ELECTRICAL	ORD	7716524 PIN	6	G244-7716524 CONTACT 5935-771-6524 PIN
5935-771-6526 CONTACT, ELECTRICAL	ORD	7716526 PIN	8	G244-7716526 CONTACT 5935-771-6526 PIN

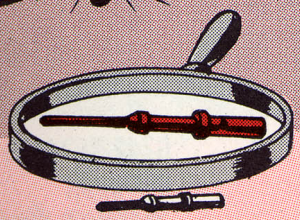
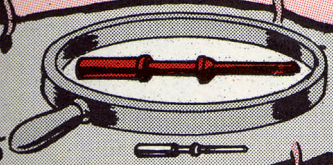
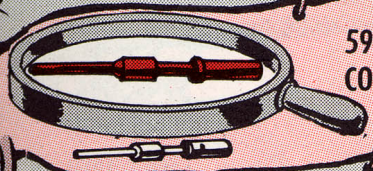
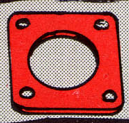
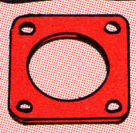
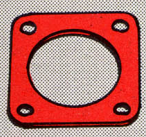
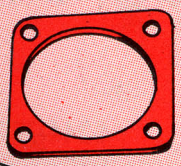
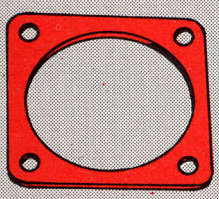
5935-636-6876 CONTACT, ELECTRICAL	ORD	7527654 SOCKET	50	G244-7527654 SOCKET 5935-752-7654
5935-491-8193 CONTACT, ELECTRICAL	ORD	7527650 SOCKET	50	G244-7527650 SOCKET
5935-752-7648 CONTACT, ELECTRICAL	SIG	7527648 SOCKET	50	G244-7527648 SOCKET
5935-259-3143 CONTACT, ELECTRICAL	ORD	7527652 SOCKET	50	G244-7527652 SOCKET 2805-752-7652
5935-752-7655 CONTACT, ELECTRICAL	ORD	7527655 PIN	50	G244-7527655 PIN 5315-752-7655

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5935-771-6525 CONTACT, ELECTRICAL	ORD	7716525 SOCKET	6	G244-7716525 CONTACT
5935-771-6527 CONTACT, ELECTRICAL	ORD	7716527 SOCKET	8	G244-7716527 SOCKET
5935-368-4852 CONTACT, ELECTRICAL	ORD	7716522 PIN	2	G244-7716522 CONTACT 5935-368-4852 PIN
5935-771-6524 CONTACT, ELECTRICAL	ORD	7716524 PIN	6	G244-7716524 CONTACT 5935-771-6524 PIN
5935-771-6526 CONTACT, ELECTRICAL	ORD	7716526 PIN	8	G244-7716526 CONTACT 5935-771-6526 PIN

5935-636-6876 CONTACT, ELECTRICAL	ORD	7527654 SOCKET	50	G244-7527654 SOCKET 5935-752-7654
5935-491-8193 CONTACT, ELECTRICAL	ORD	7527650 SOCKET	50	G244-7527650 SOCKET
5935-752-7648 CONTACT, ELECTRICAL	SIG	7527648 SOCKET	50	G244-7527648 SOCKET
5935-259-3143 CONTACT, ELECTRICAL	ORD	7527652 SOCKET	50	G244-7527652 SOCKET 2805-752-7652
5935-752-7655 CONTACT, ELECTRICAL	ORD	7527655 PIN	50	G244-7527655 PIN 5315-752-7655

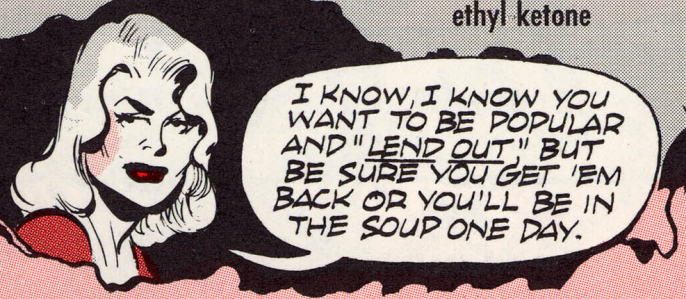
SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5935-752-7651 CONTACT, ELECTRICAL	ORD	7527651 PIN	50	G244-7527651 PIN 5315-752-7651
5935-752-7649 CONTACT, ELECTRICAL	ORD	7527649 PIN	50	G244-7527649 PIN 5315-752-7649
5935-491-8194 CONTACT, ELECTRICAL	ORD	7527653 PIN	50	G244-7527653 PIN 5315-752-7653
5935-593-6442 GASKET	ORD	7358501 Gasket	5	G244-7722235 GASKET 5935-358-7151
5330-641-4338 GASKET	ORD	7358502 Gasket	5	G251-7732876 GASKET 5330-773-2876
5330-543-6849 GASKET	ORD	7358503 Gasket	5	G244-7722223 GASKET 5935-772-2223
5330-641-4336 GASKET	ORD	7388352 Gasket	5	G244-7716562 GASKET
5330-599-6089 GASKET	ORD	7388357 Gasket	5	G244-7716563 GASKET 5330-771-6563
5325-631-6886 GROMMET, CONNECTOR	ORD	7731435 Grommet	2	G742-7731435 GROMMET 5330-773-1435 GROMMET, RUBBER
5935-752-7630 GROMMET, RUBBER	ORD	7527630 Grommet	1	G251-7527630 GROMMET 5325-752-7630 GROMMET, RUBBER

MORE

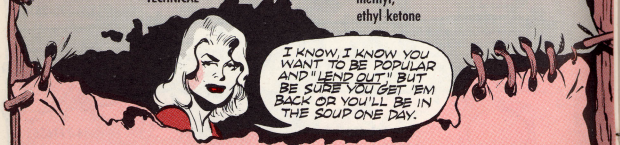
SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
 5935-752-7651 CONTACT, ELECTRICAL	ORD	7527651 PIN	50	G244-7527651 PIN 5315-752-7651
 5935-752-7649 CONTACT, ELECTRICAL	ORD	7527649 PIN	50	G244-7527649 PIN 5315-752-7649
 5935-491-8194 CONTACT, ELECTRICAL	ORD	7527653 PIN	50	G244-7527653 PIN 5315-752-7653
 5935-593-6442 GASKET	ORD	7358501 Gasket	5	G244-7722235 GASKET 5935-358-7151
 5330-641-4338 GASKET	ORD	7358502 Gasket	5	G251-7732876 GASKET 5330-773-2876
 5330-543-6849 GASKET	ORD	7358503 Gasket	5	G244-7722223 GASKET 5935-772-2223
 5330-641-4336 GASKET	ORD	7388352 Gasket	5	G244-7716562 GASKET
 5330-599-6089 GASKET	ORD	7388357 Gasket	5	G244-7716563 GASKET 5330-771-6563
5325-631-6886 GROMMET, CONNECTOR	ORD	7731435 Grommet	2	G742-7731435 GROMMET 5330-773-1435 GROMMET, RUBBER
5935-752-7630 GROMMET, RUBBER	ORD	7527630 Grommet	1	G251-7527630 GROMMET 5325-752-7630 GROMMET, RUBBER

PS MORE

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5325-338-1274 GROMMET, RUBBER	ORD	7524564 Grommet	2	G742-7524564 GROMMET GROMMET, RUBBER
5325-090-5426 GROMMET, RUBBER	ORD	7722333 Grommet	2	G592-7722333 GROMMET 5325-090-5426 GROMMET, RUBBER
5970-224-5277 INSULATING COMPOUND, ELECTRICAL	ORD	7527657 Compound, insulating and sealing electrical connections	1	52-C-3096-750 COMPOUND COMPOUND, DC-4
6810-264-8983 METHYL ETHYL KETONE, TECHNICAL	CML	7527656 Thinner, methyl, ethyl ketone	1	52-T-620 THINNER
5935-333-3088 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723306 NUT, retaining, grommet	2	G244-7723306 NUT 5975-772-3306
5935-333-4222 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723307 NUT	2	G244-7723307 NUT 5310-772-3307
5935-333-9414 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723308 NUT, retaining, grommet	3	G244-7723308 NUT 5975-772-3308
5935-772-3309 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723309 NUT, retaining, grommet	3	G592-7723309 NUT 5310-772-3309
5975-697-6991 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527643 NUT, coupling	2	G244-7527643 NUT 5310-752-7643



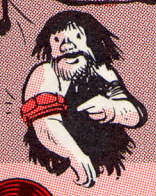
SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5325-338-1274 GROMMET, RUBBER	ORD	7524564 Grommet	2	G742-7524564 GROMMET GROMMET, RUBBER
5325-090-5426 GROMMET, RUBBER	ORD	7722333 Grommet	2	G592-7722333 GROMMET 5325-090-5426 GROMMET, RUBBER
5970-224-5277 INSULATING COMPOUND, ELECTRICAL	ORD	7527657 Compound, insulating and sealing electrical connections	1	52-C-3096-750 COMPOUND COMPOUND, DC-4
6810-264-8983 METHYL ETHYL KETONE, TECHNICAL	CML	7527656 Thinner, methyl, ethyl ketone	1	52-T-620 THINNER



5935-333-3088 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723306 NUT, retaining, grommet	2	G244-7723306 NUT 5975-772-3306
5935-333-4222 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723307 NUT	2	G244-7723307 NUT 5310-772-3307
5935-333-9414 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723308 NUT, retaining, grommet	3	G244-7723308 NUT 5975-772-3308
5935-772-3309 NUT, BUSHING RETAINER, ELECTRICAL CONNECTOR	ORD	7723309 NUT, retaining, grommet	3	G592-7723309 NUT 5310-772-3309
5975-697-6991 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527643 NUT, coupling	2	G244-7527643 NUT 5310-752-7643

SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5975-697-6992 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527644 NUT, coupling	2	G244-7527644 NUT 5310-752-7644
5975-697-7769 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527645 NUT, coupling	2	G244-7527645 NUT 5310-752-7645
5975-697-7860 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7716633 NUT, coupling	2	G262-7716633 NUT 5310-771-6633
5975-771-6634 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7716634 NUT, coupling	4	G262-7716634 NUT 5310-771-6634
5330-514-4461 RETAINER, PACKING	ORD	7527642 WASHER, gland	2	G244-7527642 WASHER 5310-752-7642 WASHER, RECESSED
5330-514-4460 RETAINER, PACKING	ORD	7716715 WASHER, gland	2	G244-7716715 WASHER 5310-771-6715 WASHER, RECESSED
5330-514-4462 RETAINER, PACKING	ORD	7716716 WASHER, gland	2	G244-7716716 WASHER 5310-771-6716 WASHER, RECESSED
5330-514-4459 RETAINER, PACKING	ORD	7527641 WASHER, gland	5	G244-7527641 WASHER 5310-752-7641 WASHER, RECESSED
5330-514-4458 RETAINER, PACKING	ORD	7716718 WASHER, gland	2	G244-7716718 WASHER 5310-771-6718 WASHER, RECESSED

MORE



SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5975-697-6992 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527644 NUT, coupling	2	G244-7527644 NUT 5310-752-7644
5975-697-7769 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7527645 NUT, coupling	2	G244-7527645 NUT 5310-752-7645
5975-697-7860 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7716633 NUT, coupling	2	G262-7716633 NUT 5310-771-6633
5975-771-6634 NUT, COUPLING, ELECTRICAL CONDUIT	ORD	7716634 NUT, coupling	4	G262-7716634 NUT 5310-771-6634
5330-514-4461 RETAINER, PACKING	ORD	7527642 WASHER, gland	2	G244-7527642 WASHER 5310-752-7642 WASHER, RECESSED
5330-514-4460 RETAINER, PACKING	ORD	7716715 WASHER, gland	2	G244-7716715 WASHER 5310-771-6715 WASHER, RECESSED
5330-514-4462 RETAINER, PACKING	ORD	7716716 WASHER, gland	2	G244-7716716 WASHER 5310-771-6716 WASHER, RECESSED
5330-514-4459 RETAINER, PACKING	ORD	7527641 WASHER, gland	5	G244-7527641 WASHER 5310-752-7641 WASHER, RECESSED
5330-514-4458 RETAINER, PACKING	ORD	7716718 WASHER, gland	2	G244-7716718 WASHER 5310-771-6718 WASHER, RECESSED

P.S. MORE

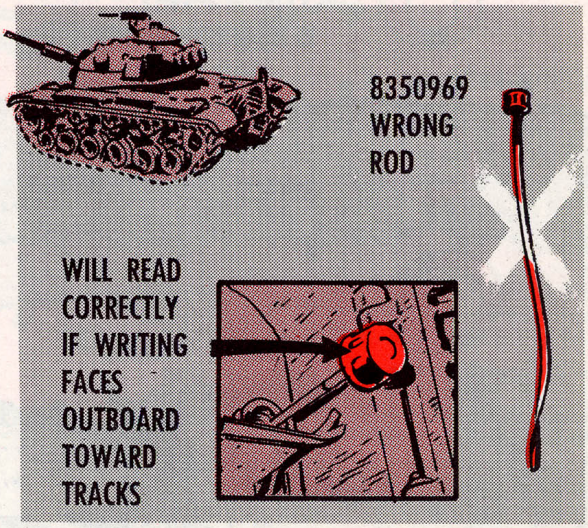
SM 9-4-5935-S01 Get 'em by these FSN's and Nomenclatures	It comes from	It says this on the package:	Amount in package	The Ord 7 SNL's call 'em this:
5310-752-7639 WASHER, SPRING TENSION	ORD	7527639 WASHER, waved	10	G244-7527639 WASHER 5310-752-7639 WASHER, SPRING TENSION
5310-752-7640 WASHER, SPRING TENSION	ORD	7527640 WASHER, waved	5	G244-7527640 WASHER 5310-752-7640 WASHER, SPRING TENSION
5310-771-6721 WASHER, SPRING TENSION	ORD	7716721 WASHER, waved	10	G262-7716721 WASHER 5310-771-6721 WASHER, SPRING TENSION
5310-771-6722 WASHER, SPRING TENSION	ORD	7716722 WASHER, waved	5	G244-7716722 WASHER 5310-771-6722 WASHER, SPRING TENSION

M60 TANK DIP STICKS

Dear Editor,

We have been having a little trouble with the transmission oil level gage rod on our M60 tanks.

It is perfectly straight and the Ord number stamped on the cap is 8350969B. However, TM 9-2350-215-20P (Oct 60) in Fig 35 Item 1 shows a twist in the lower part of the M60 transmission gage rod and the number is 8350969 without the B. Howcum? Do we have the wrong gage rod?



With our transmission oil level gage rod Ord Number 8350969B (FSN 2520-673-2973) the reading on the inboard surface of the rod (with the oil cold—before operations) is about an inch and a half lower than the reading on the

outboard surface facing toward the tracks.

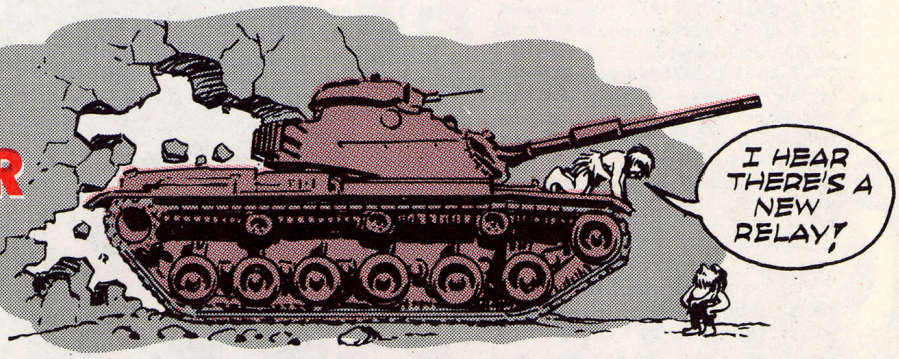
According to our tests, the outboard reading is the correct one and we have gotten in the habit of putting in the gage so the marks and the printing on the tape face outboard, toward the tracks.

Are we doing right?

Lt. Jerrell Hamby
APO 39, N. Y.

(Ed Note—You're right, Sir. Also, you have the correct gage rod. The straight gage rod is used because the filler pipe on the M60 tank transmission has sharp bends. The Fig in the -20P illustrates a development model that has been discontinued. The twist is OK on the dance floor but not on the M60 transmission gage rod.)

M60 STARTER RELAY



Dear Half-Mast,

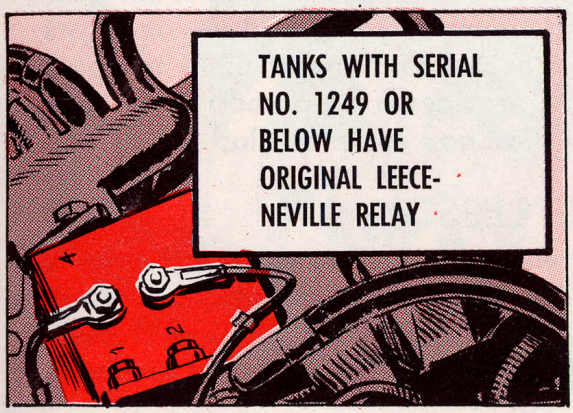
We're having some trouble with the starter relay on our M60 tank. We hear there is a new relay in the system. What is the dope on this?

CWO M. S.

Dear Mr. M. S.,

There's a new relay all right. It's Delco starter relay FSN 2920-897-6733. M60 tanks with serial number 1250 and up have it.

Tanks with serial numbers 5 through 1249 will use the Delco relay when your mechanic has installed MWO 9-2350-215-20/9 (1 Jul 62). This MWO includes a complete kit, FSN 2920-897-6732, which contains the new Delco relay and the parts needed to apply it to the vehicle.



On tanks with serial number 1249 or below you may have the original equipment, a Leece-Neville starter relay, FSN 2920-678-4254, or you may have either starter relay FSN 5945-518-9383 or FSN 5945-612-5740 applied as part of a field fix to some tanks.

If the "field fix" was applied, remove the FSN 5945-relay and restore the wiring to its original condition before you install the new Delco relay kit.

In any case, before installing any starter relay, check with your support unit and find out which one you should mount.

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 3-1040-221-12 Sep Serv Kit Port Flame Thrower—Riot Control Agent Disperser M27.
TM 3-4230-204-15 Oct Decontaminating Apparatus, Portable, DS2, 1½ Qt, ABC-M11.
TM 3-4240-214-12, Oct Filter Unit, Gas-Particulate, EMD, 2400 CFM, E45R2.
TM 5-3415-200-25P, Nov Grinding Machine, Lofstrand Model PLS-104.
TM 5-3655-206-20P/2 Nov Generating Plant, Oxygen-Nitrogen, Air Products Model Leon-20.
TM 5-3655-206-20P/3 Nov Generating Plant, Oxygen-Nitrogen, Air Products Model Leon-20.
TM 5-3810-228-20 Nov Crane-Shovel, Quickway Model M202.
TM 5-3825-213-20P Nov Snow Removal Unit, (FWD Model S-349-V.)
TM 5-3825-219-20P Oct Snowplow, Oshkosh Model Wt 2206.
TM 5-4120-209-20P Nov Nike-Ajax, Air Cond, Heaters, Fans & Blowers.
TM 5-4310-241-25P Oct Comp, Recip: Air; 5CFM; 175 PSI; Hand Trk Mtd; Gas Driven (Champion Pneumatic Mod LP-512-ENG) Less Engine.
TM 5-4310-242-25P Oct Comp, Recip.
TM 5-6115-343-15 Nov Generator Set, 120V, Single Phase 400 Cycle.
TM 9-1220-221-20P Nov Computer, Gun Direction, M18.
TM 9-1410-500-20P/1 Nov Hawk.
TM 9-1440-301-20P/2 Oct Sergeant.
TM 9-1430-250-20P/10/2 Oct Nike-Hercules, Ground Equip.
TM 9-1430-400-12 Oct LaCrosse.
TM 9-1430-501-20P/2 Nov Hawk.
TM 9-1430-503-20P/1 Oct Hawk.
TM 9-1430-504-20P/1 Oct Hawk.
TM 9-1430-505-20P/1 Oct Hawk.
TM 9-1430-510-20P/2 Oct Hawk.
TM 9-1440-301-20P/2 Oct Sergeant.
TM 9-2320-218-10 Oct Truck ¼-Ton M151.
TM 9-2350-215-20, -20P Oct Tank, 105-MM Gun, M60A1.
TM 9-4910-401-12 Nov Low Tens Cir Auto Gen and Volt Reg Test Set.
TM 10-200 Oct Pipefitting.
TM 10-500-13-1 Oct Rigging Radio Teletypewriter in M38A1.
TM 10-8340-204-10, -23 Oct Tent, Gen Purpose Lg; Gen Purpose Med.
TM 11-5820-398-10 Oct Radio Set AN/PRC-25.
TM 11-5820-498-10/20 Nov Radio Sets AN/VRC-53, AN/GRC-125 & Amplifier-Power Supply Group OA-3633/GRC.
TM 11-5895-294-20/2 Nov Coder-Decoder Group, Maintenance Illustrations and Interconnection Lists.
TM 11-5965-209-15P Nov Headset H-32/U & H-32A/U.
TM 11-6130-231-14 Nov Power Supply PP-3135/U.
TM 11-6130-231-20P Oct Power Supply PP-3135/U.
TM 11-6625-490-20P Nov Preamplifier AM-1839/USM.
TM 11-6625-504-12 Nov Standing Wave Ratio Indicator IM-166/URT.
TM 11-6625-514-12 Nov Test Set Elect Circuit Plug-In Unit AN/GRM-55.
TM 55-450-6 Oct Recovery Veh, Full-Tracked, T120E1, in USAF C-124.
TM 55-1510-202-20P Oct (O-1).
TM 55-1510-204-10CL Oct (OV-1).
TM 55-1520-202-20P Oct (CH-34).
TM 55-1520-204-20P Oct (OH-13).
TM 55-1520-206-10 Oct (OH-23).
TM 55-1520-207-20 Sep (UH-1A).
TM 55-1520-208-10CL Oct (UH-1B).
TM 55-1520-208-10CL, -20P Oct (UH-1B).
TM 55-1520-208-20 Sep (UH-1B).
TM 55-1520-208-20P Oct (UH-1B).

MODIFICATION WORK ORDERS

MWO 9-1450-500-20/9 Oct Hawk, Loader-Transporter.
MWO 9-2300-224-20/8 Oct 62 APC M113 Relocation of Bilge Pump Vent.
MWO 9-2300-224-20/9 Nov Carrier, Personnel, M113; Repl of Eng Mt Asbl Washer.
MWO 9-2300-224-20/10 Nov Carrier, Personnel, M113; Appl of Vinyl to Fl Dr Housings.
MWO 9-2300-211-20/5 Nov Chassis, Trk: 5-Ton M39, M40, M40C, M61, M63, M63C, M139, M139C, M139D, M139F, Trk Cargo: M41, M54, M55 Dump; 5-Ton M51.
MWO 9-2320-218-20/6-20/7 Nov Truck ¼-Ton M151.
MWO 9-2350-215-20/3 Oct Tank M60.
MWO 9-2350-215-20/11 Nov Tank, M60; Ammo Rack Lr and Ret Ends.

SUPPLY MANUALS

SM 3-2-4230 & 4240 Nov FSC 4230-Decontamination, 4240-Safety and Rescue Equipment.
SM 10-1-C6-2-5M, Vol. 1 Jan FSC Class 3920 Materials Handling Equipment.
SM 10-2-C6-4-PL Jan FSC Class 5110 Hand Tools.
SM 10-2-C6-6-PL Jan FSC Class 5130 Hand Tools, Power Driven.
SM 10-2-C6-8-PL Jan FSC Class 5210 Measuring Tools, Craftmen's.
SM 10-4-4520 Dec Heater, Space.

MISCELLANEOUS

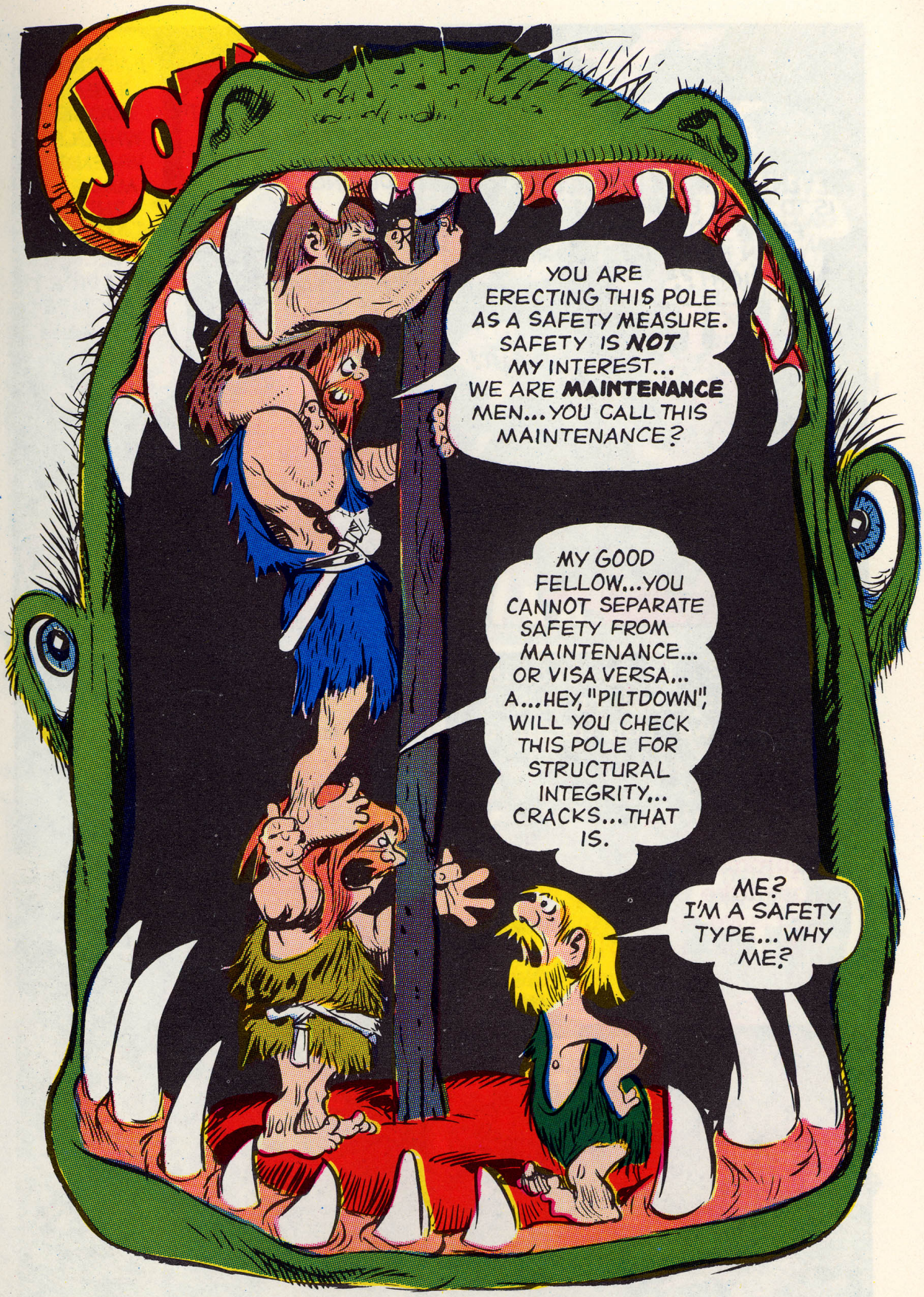
DA Cir 95-5 Nov List of Army Airfields and Heliports CONUS.
DA Pam 310-4, C3 Oct TM Index.
DA Pam 310-7, C1 Oct TAG TOE Index.
FM 20-22 Oct Vehicle Recovery Operations.
LO 5-3431-202-20 Oct Welding Machine ARC, Hobart Model GRB3183S.
LO 5-3805-209-15-1 Nov Grader, Road, Caterpillar Model 12.
LO 5-3805-209-15-3 Nov Grader, Road, Caterpillar Model 12.
LO 9-2300-224-10-1 Oct APC M113.
SB 1-15-15 Oct.
SIG 7&8 AM-1909/FSG-1 Oct Amplifier-Mixer, Tag Intensity AM-1909/FSG-1.
SIG 7&8 OA-2393/FSG-1 Nov Multiplexer Group OA-2393/FSG-1.
TB AVN 23-5-1, C3 Nov EIR Digest.
TB 9-2350-205-12/1 Oct 62 Tank M48A1 compensating idler.
TB 34-9-124 Nov Airplane, Observation Series.
TB 55-1510-206-20/2, -20/3, -20/5, and 20/6 Oct (CV-2).
TB 55-1520-207-20/2, -20P Oct (UH-1A).

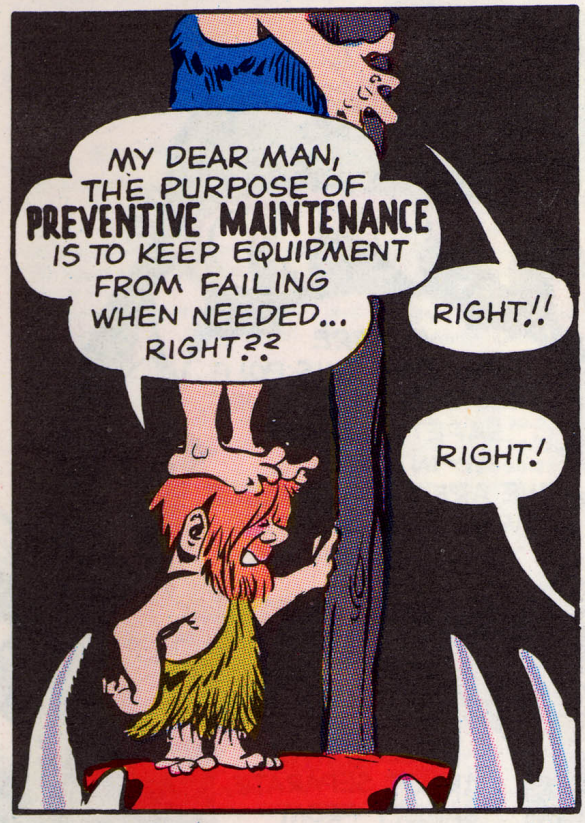
COMPANY'S COMING

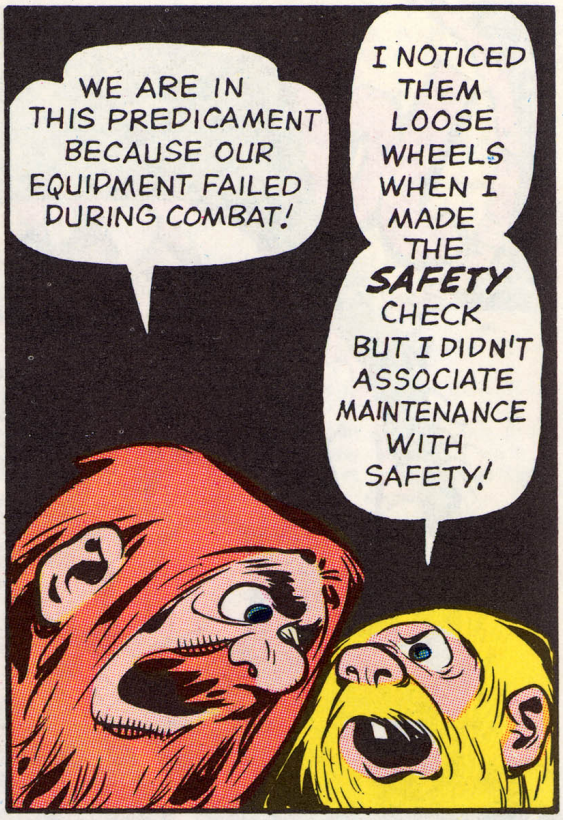
That's right . . . you Honest John outfits—if the serial number on your M386 truck mounted rocket launcher's between 11 and 112—company's coming—if it hasn't arrived already. It'll be your support outfit to apply MWO 9-1055-205-30/5 (31 Jan 62). It provides a blast hood that'll give a little extra protection to the main junction box cable at blast-off.

SWIMMING LESSON

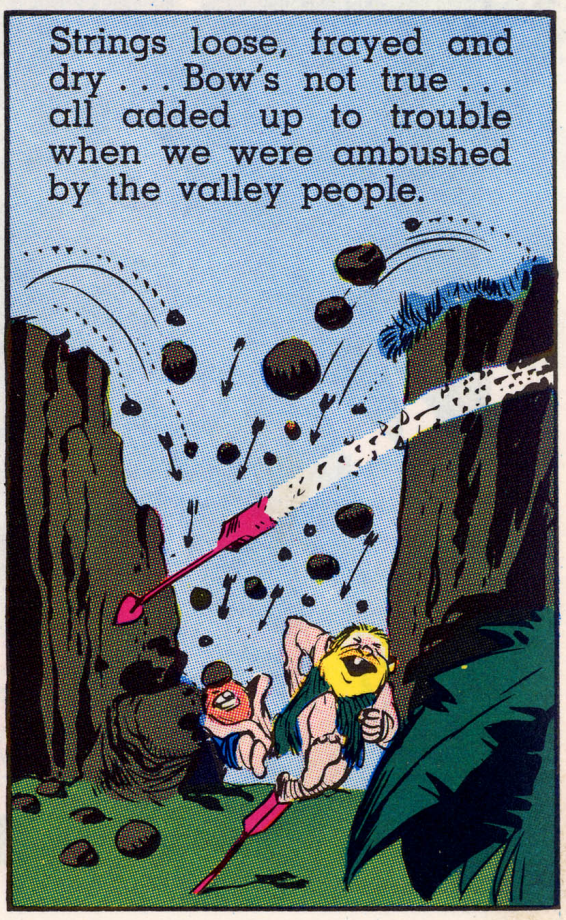
When you're taking an Ordnance vehicle for a swim, you'll first want to give your eyes a quick dip into TM 9-238 (6 Oct 61), "Deepwater Fording of Ordnance Materiel." It could save your sacroiliac when you're crossing streams or swamps. It lists both water-proofing materials and pubs you need.

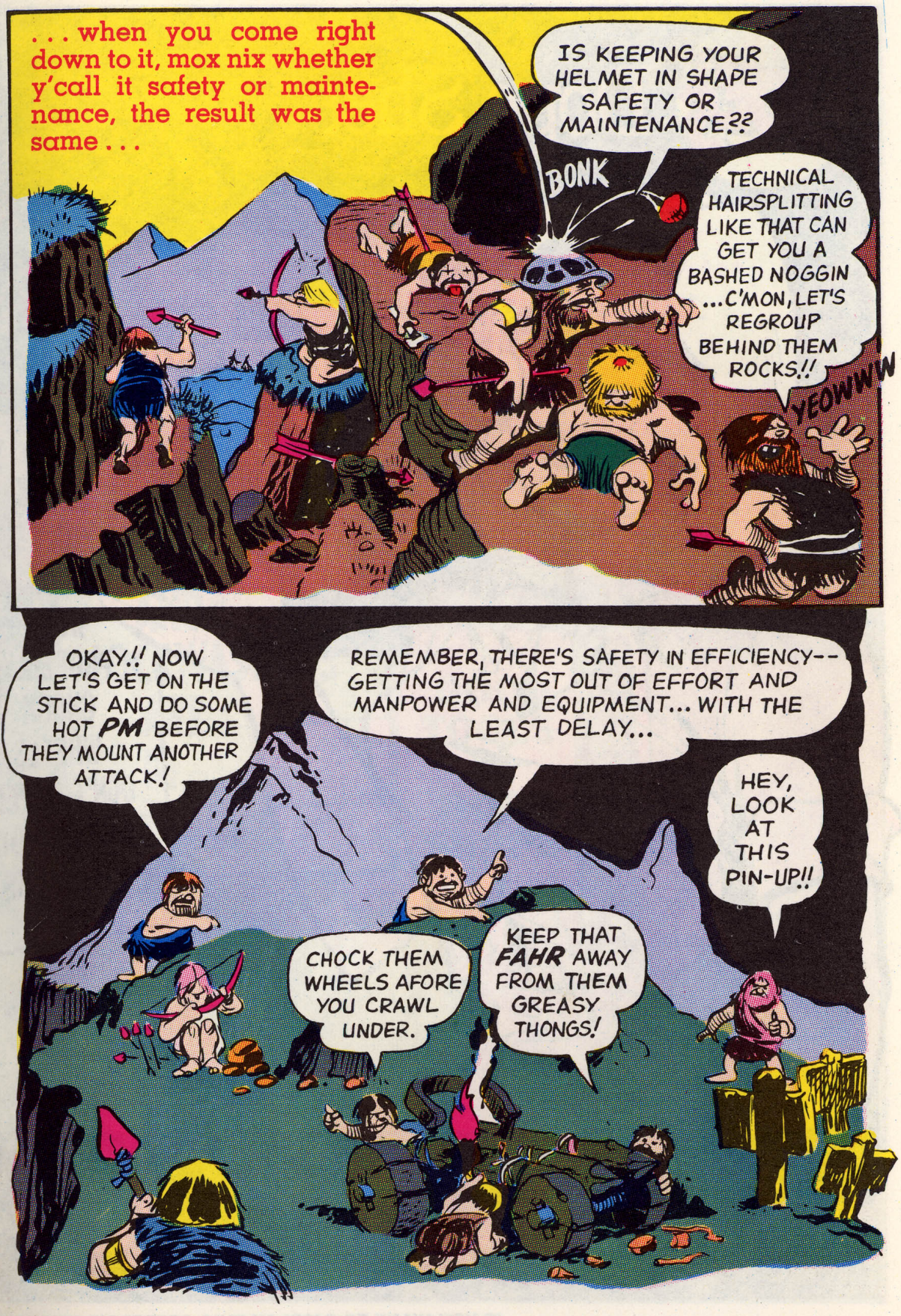

YOU ARE ERECTING THIS POLE AS A SAFETY MEASURE. SAFETY IS NOT MY INTEREST... WE ARE MAINTENANCE MEN... YOU CALL THIS MAINTENANCE?
MY GOOD FELLOW... YOU CANNOT SEPARATE SAFETY FROM MAINTENANCE... OR VISA VERSA... A... HEY, "PILTDOWN", WILL YOU CHECK THIS POLE FOR STRUCTURAL INTEGRITY... CRACKS... THAT IS.
ME? I'M A SAFETY TYPE... WHY ME?


MY DEAR MAN, THE PURPOSE OF PREVENTIVE MAINTENANCE IS TO KEEP EQUIPMENT FROM FAILING WHEN NEEDED... RIGHT??
RIGHT!!
RIGHT!

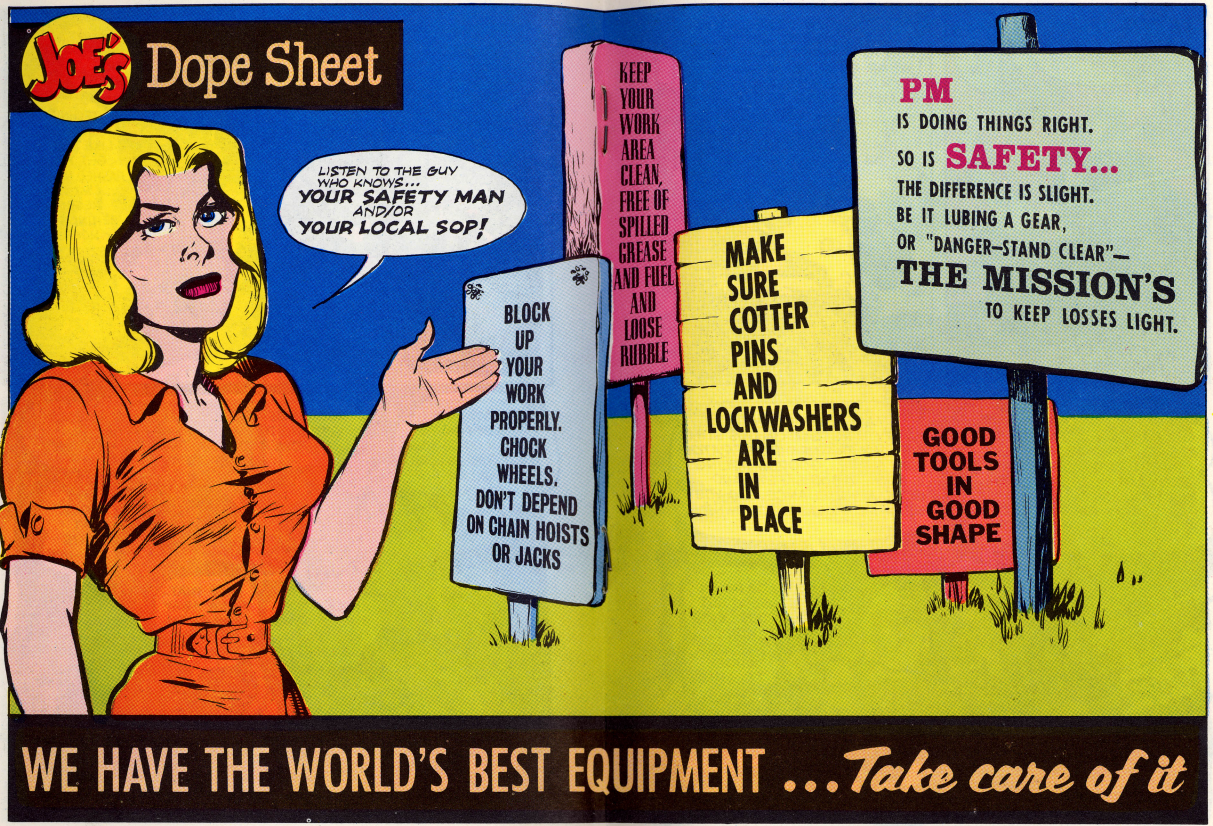

WE ARE IN THIS PREDICAMENT BECAUSE OUR EQUIPMENT FAILED DURING COMBAT!
I NOTICED THEM LOOSE WHEELS WHEN I MADE THE SAFETY CHECK BUT I DIDN'T ASSOCIATE MAINTENANCE WITH SAFETY!

Right!! So let me recount what happened. From this, maybe we can learn a lesson . . .
It goes for any kind of equipment . . . but in our case take our weapons . . . fact is we've been maintaining 'em poorly! . . . and why?? Because we didn't look ahead . . .
THIS EQUIPMENT LOOKS GOOD ENUF. LET'S GO!


Strings loose, frayed and dry . . . Bow's not true . . . all added up to trouble when we were ambushed by the valley people.

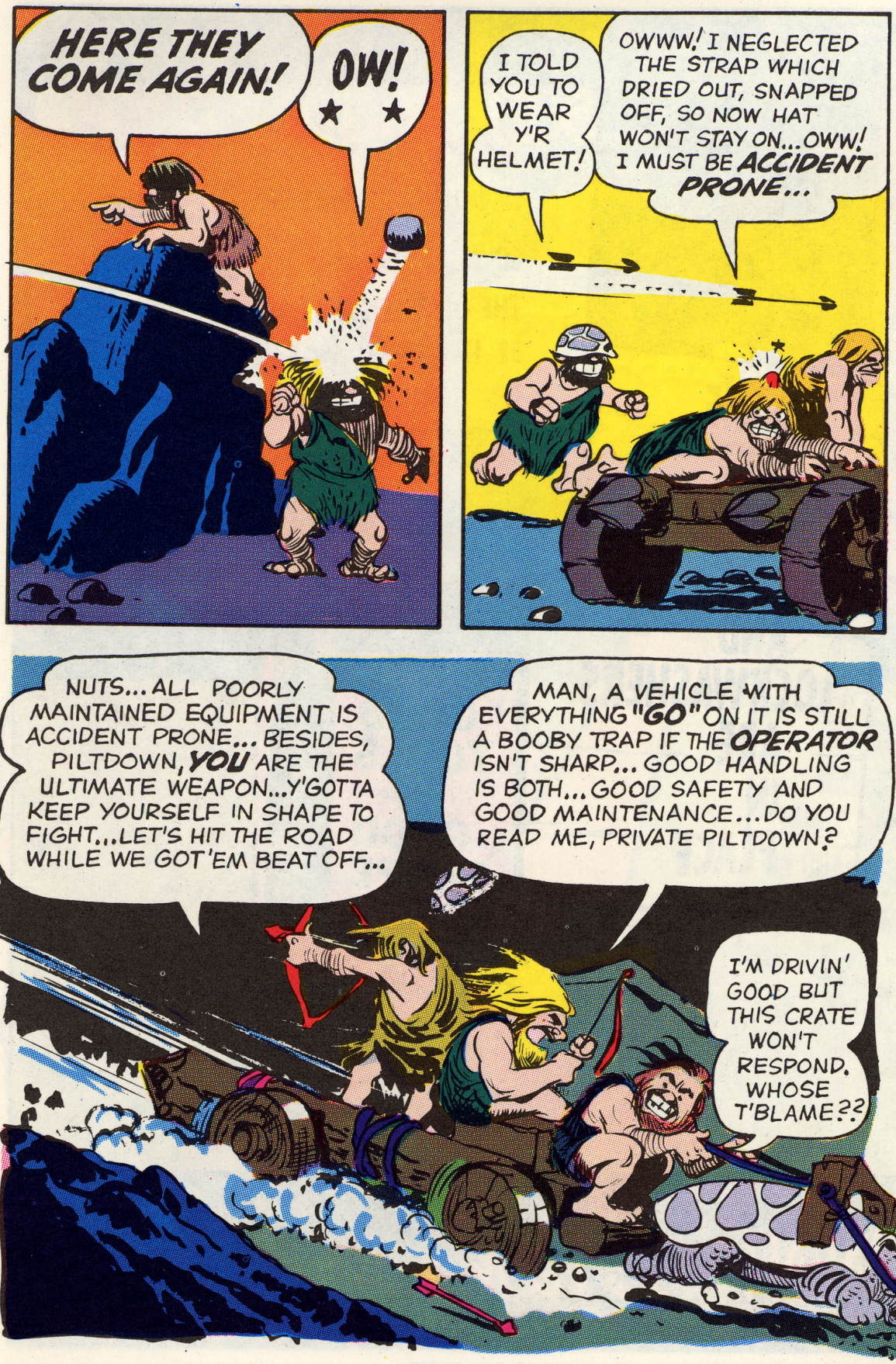

. . . when you come right down to it, mox nix whether y'call it safety or maintenance, the result was the same . . .
IS KEEPING YOUR HELMET IN SHAPE SAFETY OR MAINTENANCE??
BONK
TECHNICAL HAIRSPLITTING LIKE THAT CAN GET YOU A BASHED NOGGIN ...C'MON, LET'S REGROUP BEHIND THEM ROCKS!!
YEOWWW
OKAY!! NOW LET'S GET ON THE STICK AND DO SOME HOT PM BEFORE THEY MOUNT ANOTHER ATTACK!
REMEMBER, THERE'S SAFETY IN EFFICIENCY-- GETTING THE MOST OUT OF EFFORT AND MANPOWER AND EQUIPMENT... WITH THE LEAST DELAY...
HEY, LOOK AT THIS PIN-UP!!
CHOCK THEM WHEELS AFORE YOU CRAWL UNDER.
KEEP THAT FAHR AWAY FROM THEM GREASY THONGS!

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BU

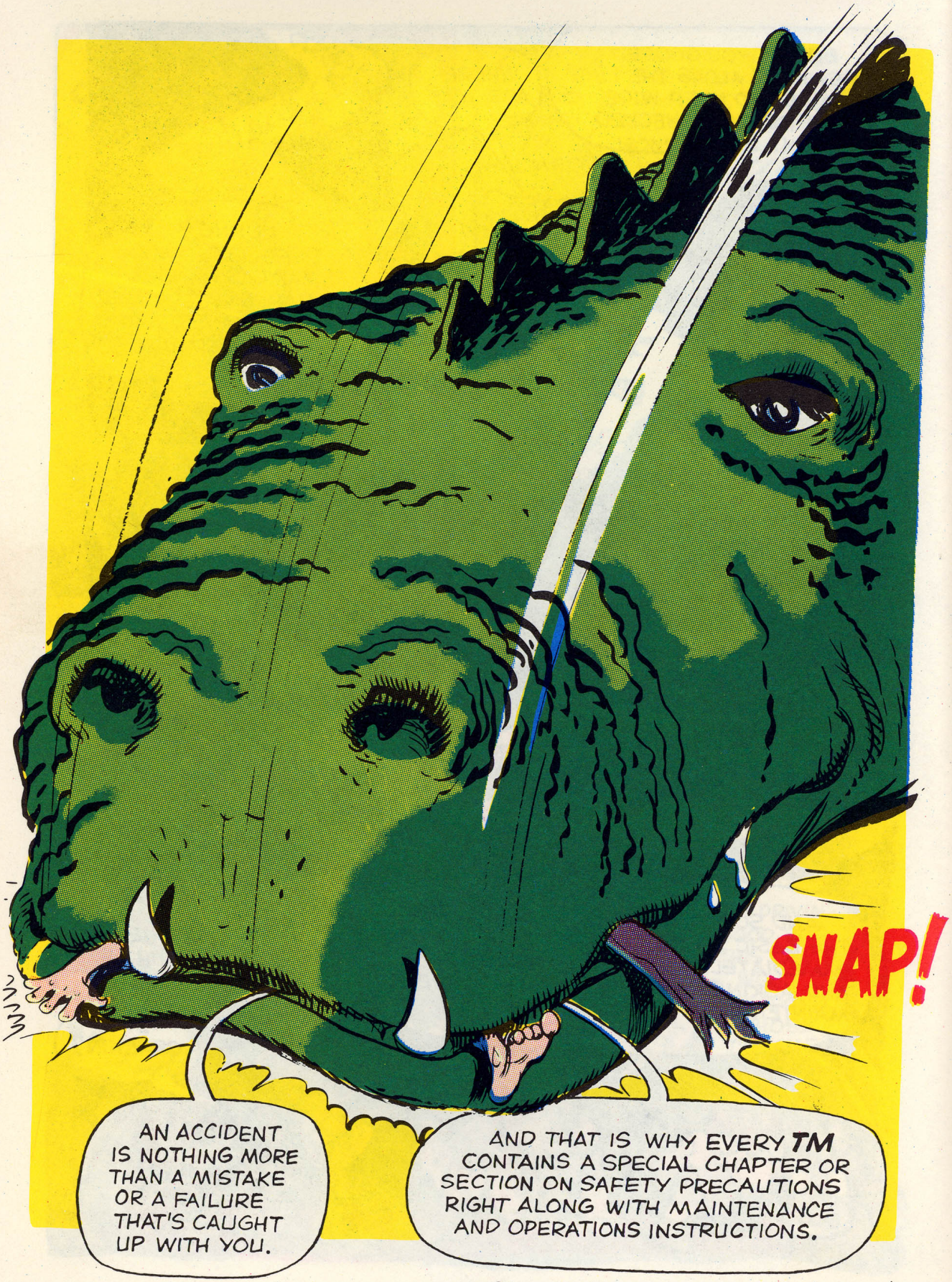


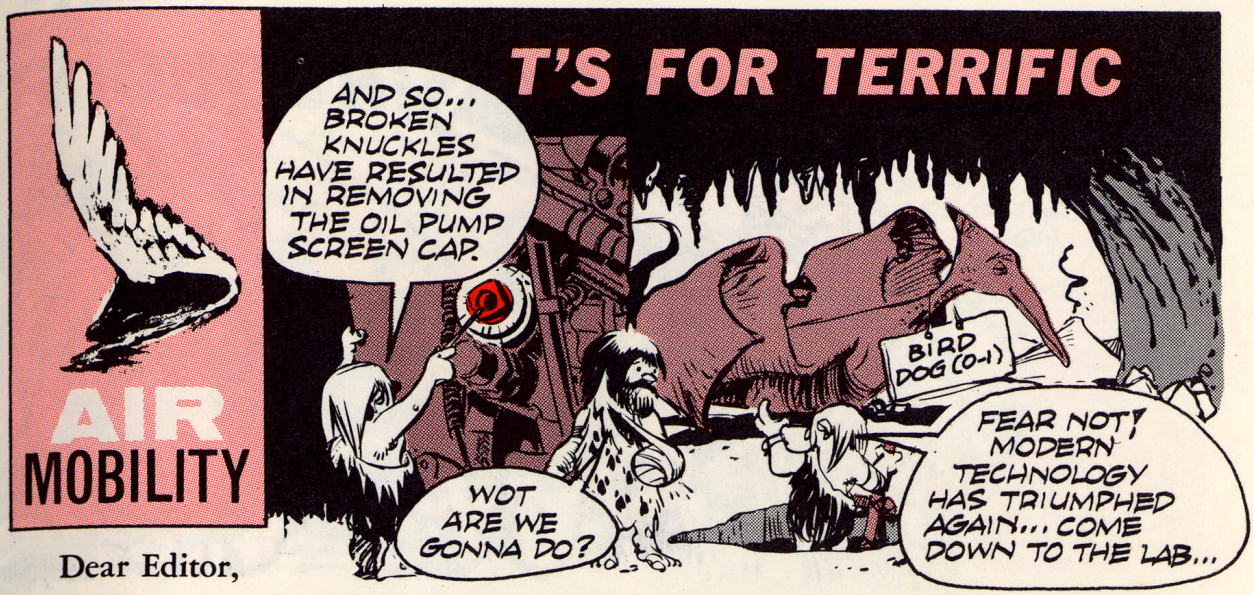
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


HERE THEY COME AGAIN!
OW!
I TOLD YOU TO WEAR Y'R HELMET!
OWWW! I NEGLECTED THE STRAP WHICH DRIED OUT, SNAPPED OFF, SO NOW HAT WON'T STAY ON...OWW! I MUST BE ACCIDENT PRONE...
NUTS... ALL POORLY MAINTAINED EQUIPMENT IS ACCIDENT PRONE... BESIDES, PILTDOWN, YOU ARE THE ULTIMATE WEAPON...Y'GOTTA KEEP YOURSELF IN SHAPE TO FIGHT...LET'S HIT THE ROAD WHILE WE GOT 'EM BEAT OFF...
MAN, A VEHICLE WITH EVERYTHING "GO" ON IT IS STILL A BOOBY TRAP IF THE OPERATOR ISN'T SHARP... GOOD HANDLING IS BOTH... GOOD SAFETY AND GOOD MAINTENANCE... DO YOU READ ME, PRIVATE PILTDOWN?
I'M DRIVIN' GOOD BUT THIS CRATE WON'T RESPOND. WHOSE T'BLAME??

EITHER YOU GOOFED SOMEWHERE ALONG THE LINE OR FAILED TO KEEP WIDE AWAKE WHEN Y'CHECKED IT OUT!
WHERE ARE WE?
DUNNO!! I NEGLECTED MY MAP CASE AND MY MAP IS WATERSOAKED, GREASE STAINED AND MUD COVERED...CAN'T READ IT!
SCREECH!
INTO THAT CAVE, QUICK!
CRACK
AND SO, THAT IS WHY I'M EMPLOYING THE BASIC SAFETY PRECAUTION OF IMMEDIATELY PUTTING UP A ROOF PROP... AND ASKING YOU TO DO A PREVENTIVE MAINTENANCE CHECK ON THE SUPPORT!
HEY!! UH OH, TOO LATE FOR PM. IT'S CRACKIN'!


SNAP!
AN ACCIDENT IS NOTHING MORE THAN A MISTAKE OR A FAILURE THAT'S CAUGHT UP WITH YOU.
AND THAT IS WHY EVERY TM CONTAINS A SPECIAL CHAPTER OR SECTION ON SAFETY PRECAUTIONS RIGHT ALONG WITH MAINTENANCE AND OPERATIONS INSTRUCTIONS.



Dear Editor,

Using an adjustable wrench on the Bird Dog (O-1) engine oil pump screen cap can be a knuckle bruising job. You don't have much clearance to maneuver the wrench.

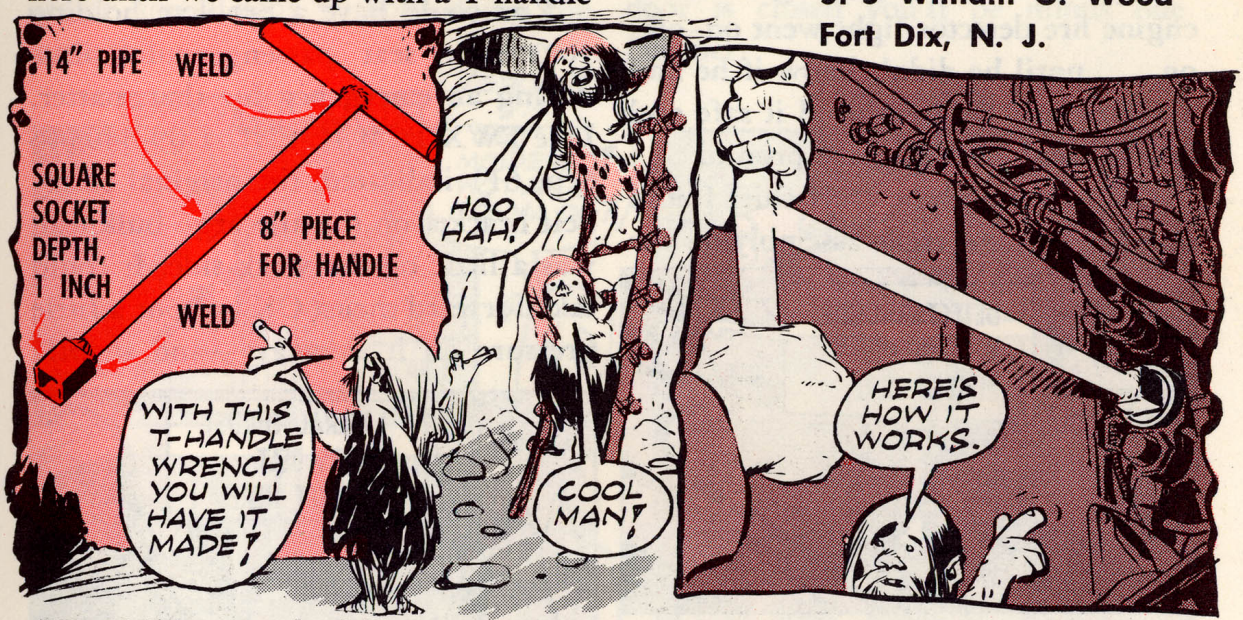
Then again the square head cap just naturally takes it on the chin when the strainer is taken out at a periodic inspection.

Well, that's the way it used to be here until we came up with a T-handle wrench with a socket to fit the cap.

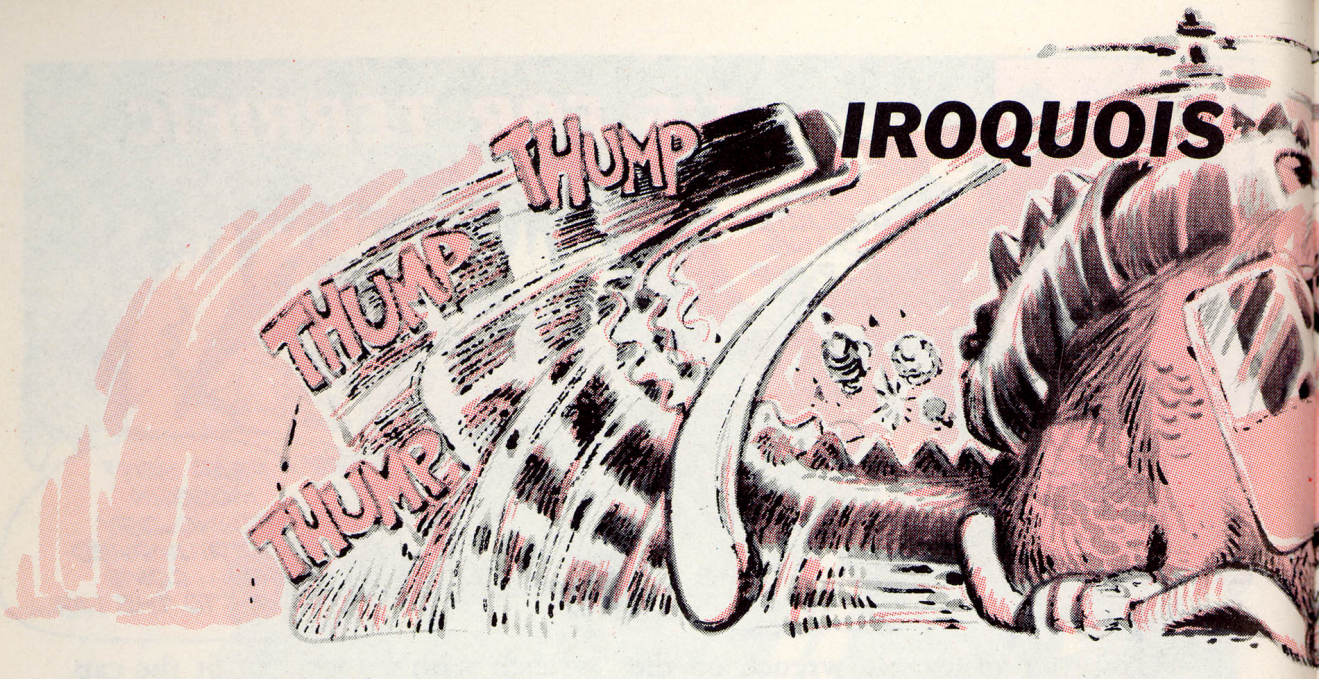
We made the square socket from ⅛-in stock to a depth of one-inch. This gave us plenty of room to weld a 14-in length of pipe into the socket. To complete the tool we welded an 8-in handle at the other end.

No more bruised knuckles and banged up fittings for us. This tool does a terrific job.

SP5 William G. Wood
Fort Dix, N. J.



(ED NOTE—Looks like you've got a good bet here. By the way, when you finish your inspection, TM 55-1520-202-20, page 3-29, paragraph 3-63, has the cleaning setup for the strainer.)

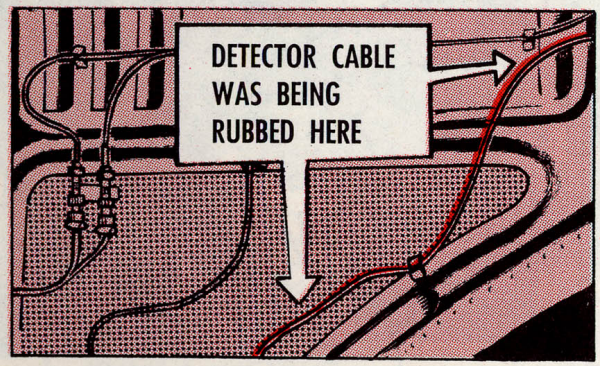


So you've just pulled a periodic on your Iroquois (UH-1A) and you say it's a masterpiece of maintenance. Congratulations!

But before you sign 'er off remember a high-time bird's bound to throw a tantrum of user problems. Just a little extra care with your inspection can help prevent awkward situations like these.

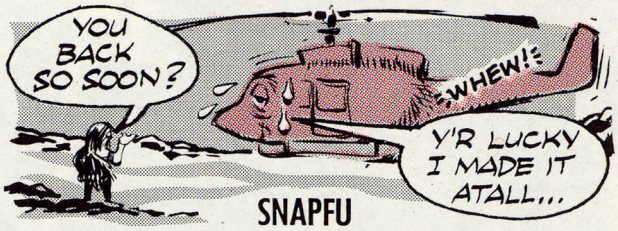
A pilot was cruising along when his engine fire detector light went on - off - on . . . until he didn't know if he had a fire or not! So he played it safe and got his bird back to base pronto.

On the ground the crew chief found that the detector cable assembly on the



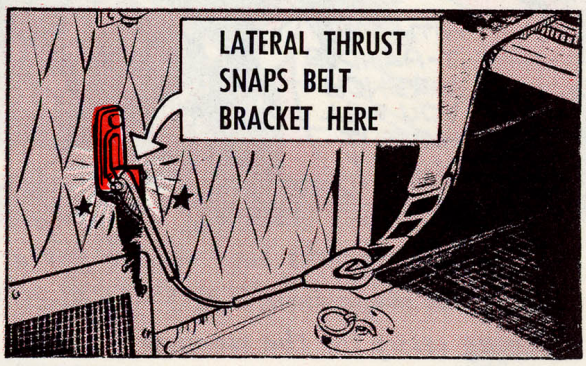
left engine cowling was rubbing on the linear actuator, setting off the fire warning light.

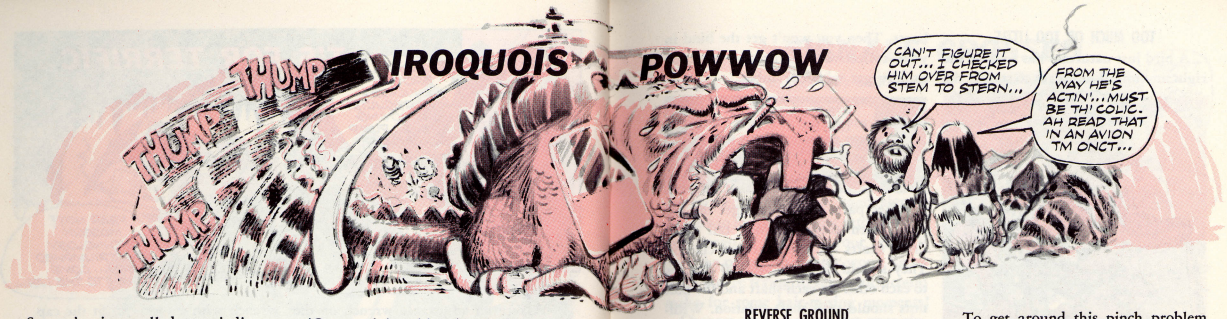
'Course giving this cable the big eye everyday will make sure the cable clips are in there doing the job—holding that cable so it won't vibrate loose.



SNAPFU

You could have a problem holding your rear seat passengers in place during an emergency for that matter. Like TWX TCMAC-EHU-1-09-0403 (6 Sept 61) indicated, the original safety belt bracket on the aft cargo bulkhead was a little on the weak side. It could take forward thrust OK but put a little pressure on it sideways—and snap!!!



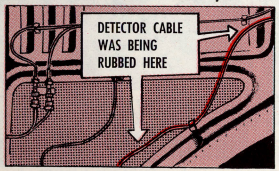


So you've just pulled a periodic on your Iroquois (UH-1A) and you say it's a masterpiece of maintenance. Congratulations!

But before you sign 'er off remember a high-time bird's bound to throw a tantrum of user problems. Just a little extra care with your inspection can help prevent awkward situations like these.

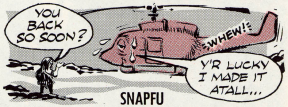
A pilot was cruising along when his engine fire detector light went on-off-on . . . until he didn't know if he had a fire or not! So he played it safe and got his bird back to base pronto.

On the ground the crew chief found that the detector cable assembly on the



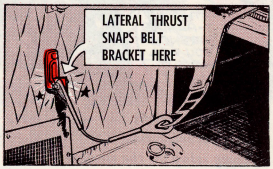
left engine cowling was rubbing on the linear actuator, setting off the fire warning light.

'Course giving this cable the big eye everyday will make sure the cable clips are in there doing the job—holding that cable so it won't vibrate loose.



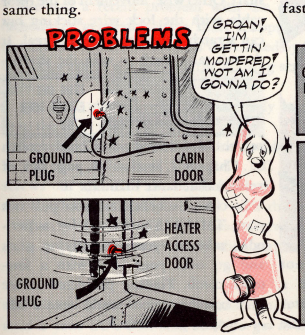
SNAPFU

You could have a problem holding your rear seat passengers in place during an emergency for that matter. Like TWX TCMAC-EHU-1-09-0403 (6 Sept 61) indicated, the original safety belt bracket on the aft cargo bulkhead was a little on the weak side. It could take forward thrust OK but put a little pressure on it sideways—and snap!!!

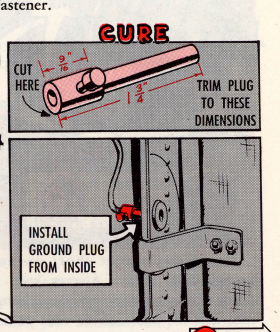


REVERSE GROUND

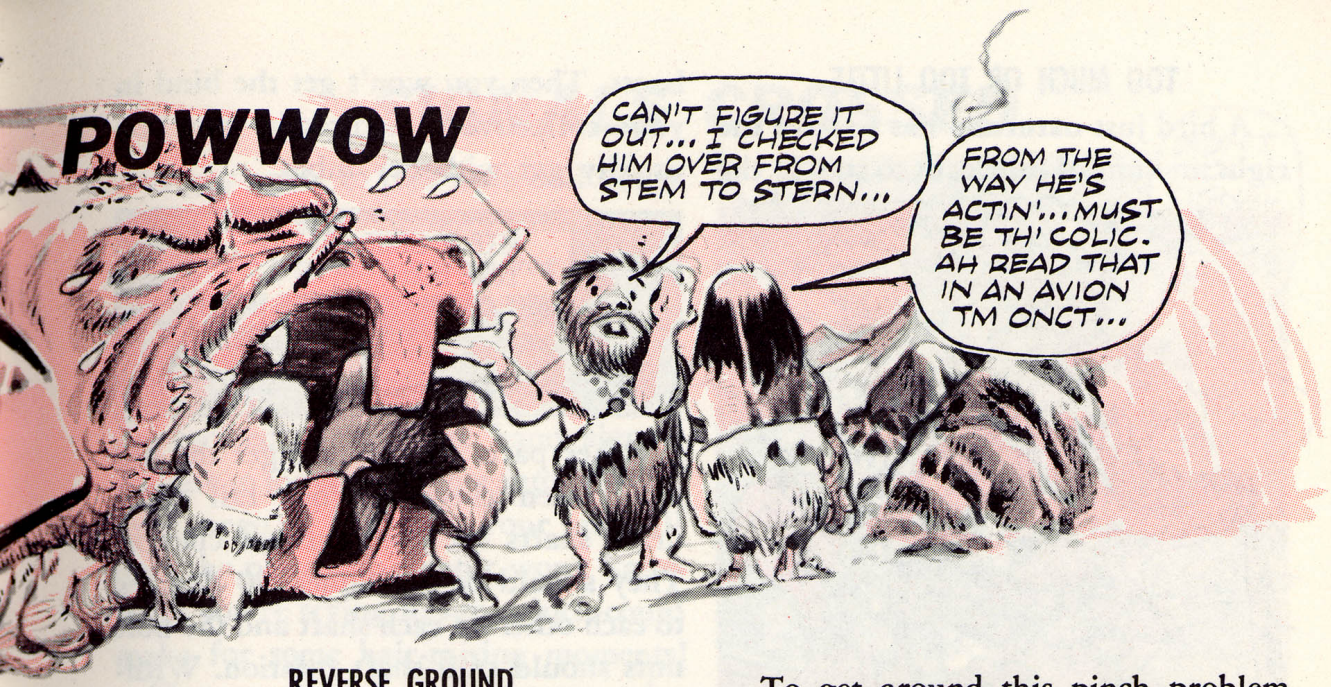
One of the best ways to ground your bird in a hangar is with an overhead cable, a connecting cable and jack plug. But here again you've got a little bit of a problem. Somebody could come along and slide the cabin door back into the plug and bust the plug and jack. Or, if you try to get at the heater with the jack plugged in, you can't open the heater access door without doing the same thing.



To get around this pinch problem you might try this for size. Take your grounding plug and cut it off at the base so it measures 1¾-in. Then you insert the grounding plug in reverse (from inside the heater compartment). Also, you want to make sure you secure the heater door fasteners. Otherwise, when the door is opened it will ride over the fastener OK—but when the door is closed you'll be minus one fastener.



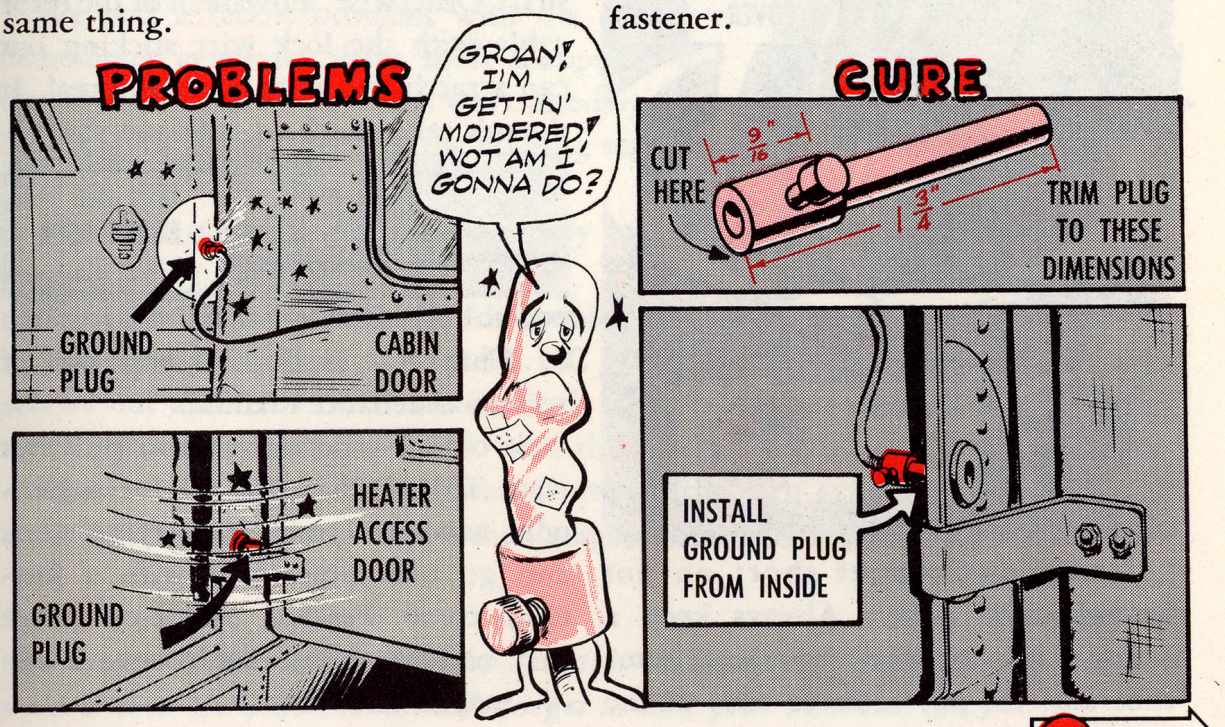
MORE



REVERSE GROUND

One of the best ways to ground your bird in a hangar is with an overhead cable, a connecting cable and jack plug. But here again you've got a little bit of a problem. Somebody could come along and slide the cabin door back into the plug and bust the plug and jack. Or, if you try to get at the heater with the jack plugged in, you can't open the heater access door without doing the same thing.

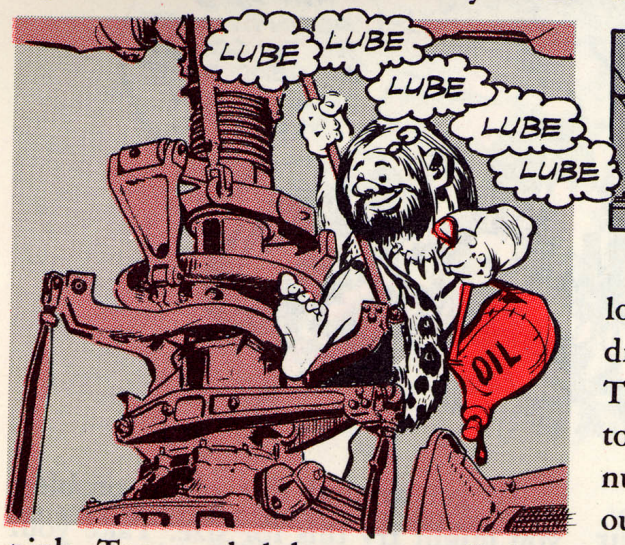
To get around this pinch problem you might try this for size. Take your grounding plug and cut it off at the base so it measures 1¾-in. Then you insert the grounding plug in reverse (from inside the heater compartment). Also, you want to make sure you secure the heater door fasteners. Otherwise, when the door is opened it will ride over the fastener OK—but when the door is closed you'll be minus one fastener.



PS MORE

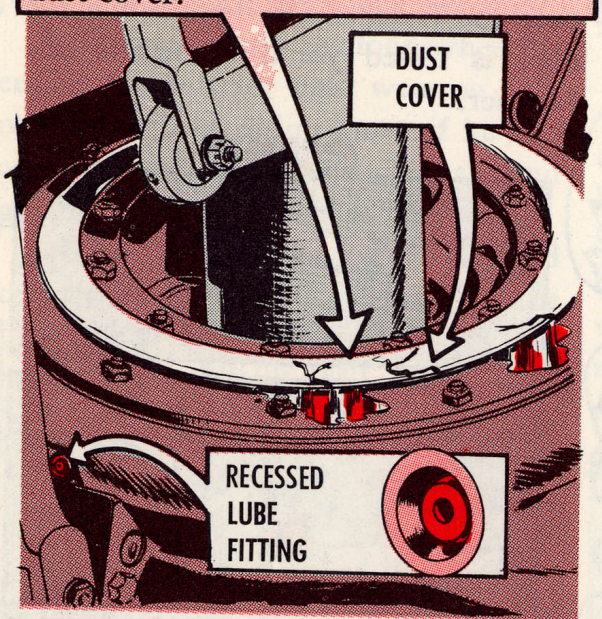
TOO MUCH OR TOO LITTLE

A bird just naturally has to have the right amount of lubricant to stay in the



pink. Too much lube—or too little—and she'll likely end up out of shape.

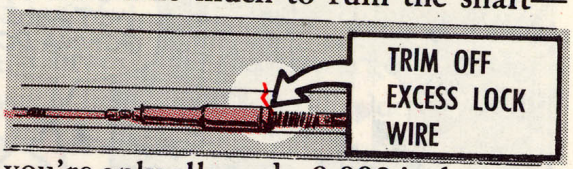
That's why, for example, it's important not to over-lube the swash-plate and support assembly. If you over-lube, the old principle of hydraulic pressure could come into play and crack your dust cover.



Never get caught short on not enough lube either. Always keep a smear of lube on the droop compensator tube and the power lever tube at the boots. Then you won't get the bind in your collective and throttle that you usually get with dry tubes.

Other parts that should get the big look when checking your tail rotor drive shafts are the Marman clamps. They should be positioned 90 degrees to each other on each shaft and the bolt nuts should trail shaft rotation. Without this rotation you could come up with a mighty annoying high frequency vibration being transmitted back to your tail rotor pedals. The No. 5 shaft can be a real vibration headache.

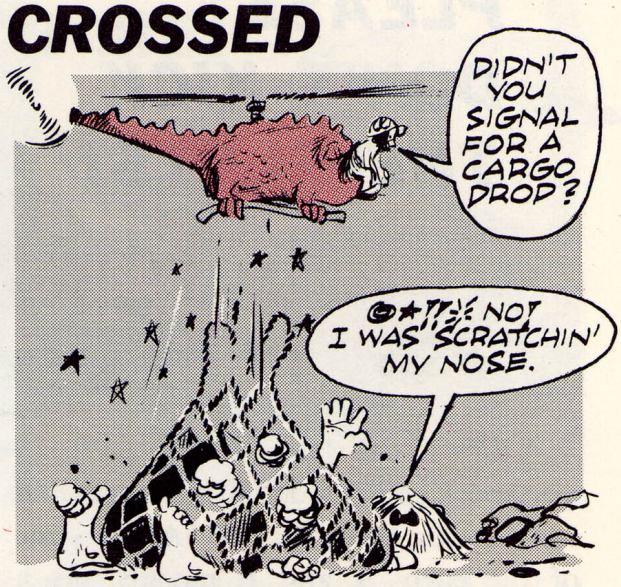
Another thing while we're talking about the drive shaft—be sure you have the excess lock wire at the quick disconnect (No. 4 shaft) cut off and the remaining tail bent away from the shaft. Otherwise, movement of the rotor cable with the lock wire sticking out can scratch the drive shaft for real. It doesn't take much to ruin the shaft—



you're only allowed a 0.002 inch scratch . . . Chapter 2, Section VI, page 6-3, of your maintenance manual.

So-o-o . . . next time you pull out your TM 55-1520-207-20 for a periodic, take out your magnifying glass and go over your bird with a fine-tooth comb. Finding problems before they become serious could **save a life . . . maybe your own!**

SIGNALS CROSSED

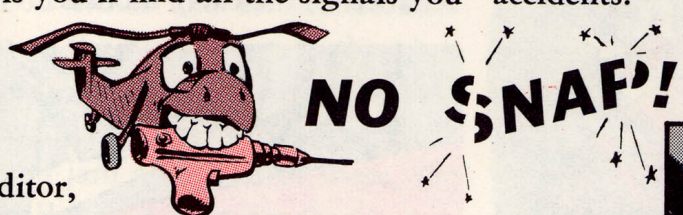


A guy tryin' to pick up a doll (or is it the other way 'round?) and a crew chief trying to help an aviator pick up a cargo have something in common—they need to understand each other.

But they get nowhere if their signals are crossed! Take those hand signals you use to move a chopper into position over cargo. If you wave your arms all over the place, the aviator won't know what you're trying to say, which could make for some hair-raising moments!

Chances are you won't get your signals crossed if you stick with the ones called out on pages 137-172 in the latest FM 21-60 (25 Jan 62) on "Visual Signals."

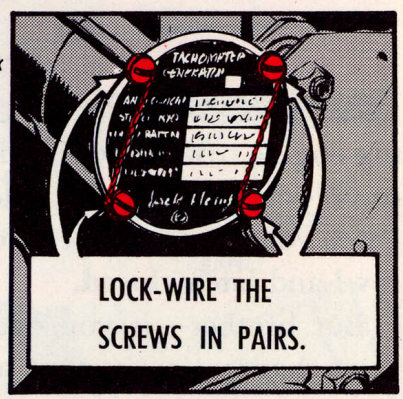
Fact is you'll find all the signals you need in this FM, not only for cargo hookup, but for guiding rotary and fixed wing birds on the ground . . . maybe help prevent personal injury or some bent aircraft parts caused by taxi accidents.



Dear Editor,

We had a recent problem with the engine tachometer generator drive shaft snapping on our Choctaws (CH-34's). This was caused by the tab lockwashers not holding the housing screws tight.

Any little movement of that assembly would snap the shaft real easy like.



So in case anybody else has this problem, here's a way we found to lick it.

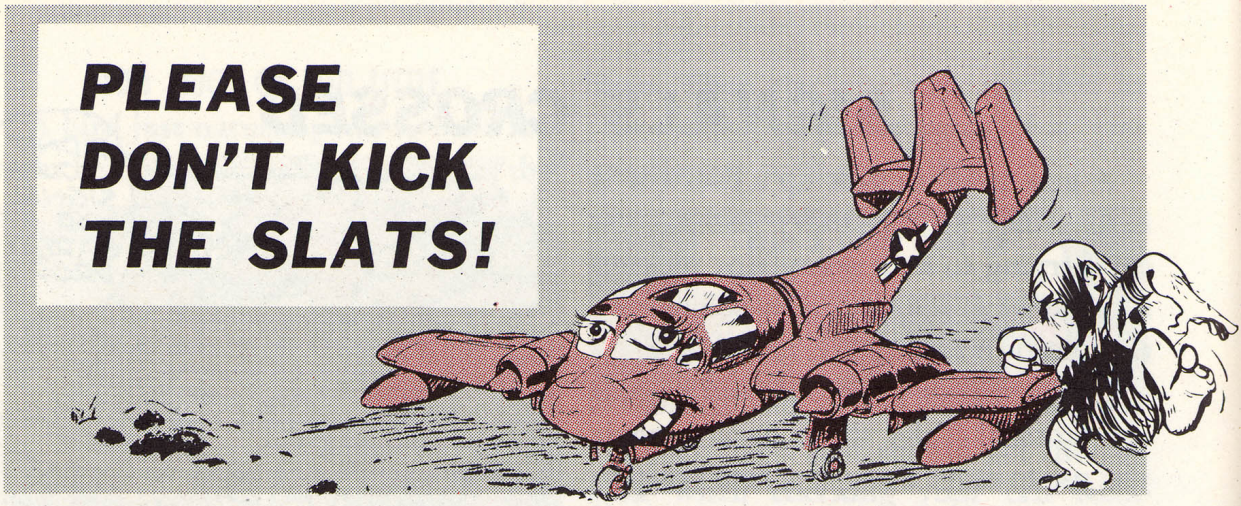
You just take those four 8-32 NC 3Ax3-1/16-in or similar commercial screws out and drill the heads for lock wire . . . or get yourself the same size screw (through local purchase) with the hole already drilled.

Then you put the drilled head screws in the tach generator and lock-wire them in pairs. The screws will then stay in place for keeps.

S/Sgt. Joseph A. Pahl
Ft. Knox, Ky.

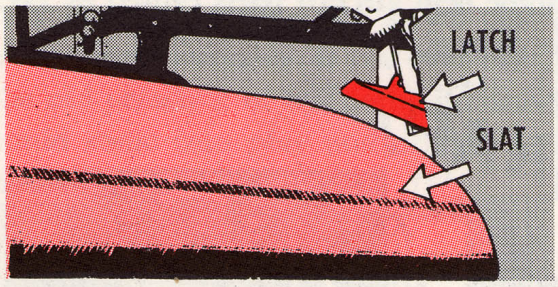
(Ed Note—If you're snapping cables, this looks like a good repair . . . all you need is your CO's OK. And don't forget to EIR your solution, too.)

PLEASE DON'T KICK THE SLATS!



A kick in the slats just ain't polite in any sport and it's definitely not called for on your Mohawk OV-1A and some of the early A and B models. As a matter of fact it can temporarily put a bird right out of the 'ol flying game.

The villain that can supply the boot to the wing slats is this innocent look-

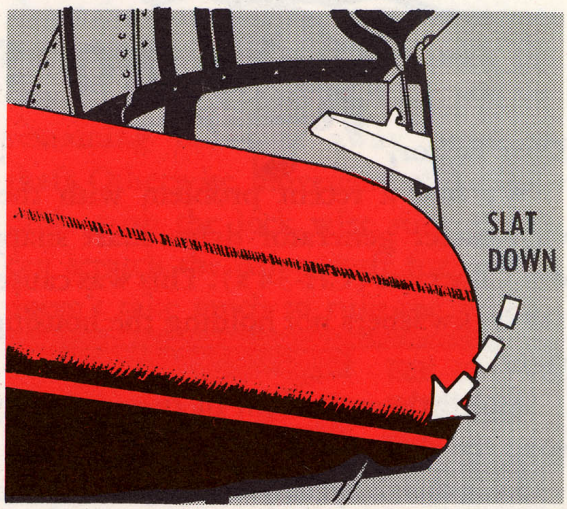


ing engine cowl lower latch. She won't cause you any trouble as long as you check your flap-slat operation with the cowl and latch **closed.**

But brother—if you hook up auxiliary hydraulic pressure and hit the flap control with the cowl still open, look out!!! The slat will bend that rear cowl latch into a pretzel and tear itself up for real.

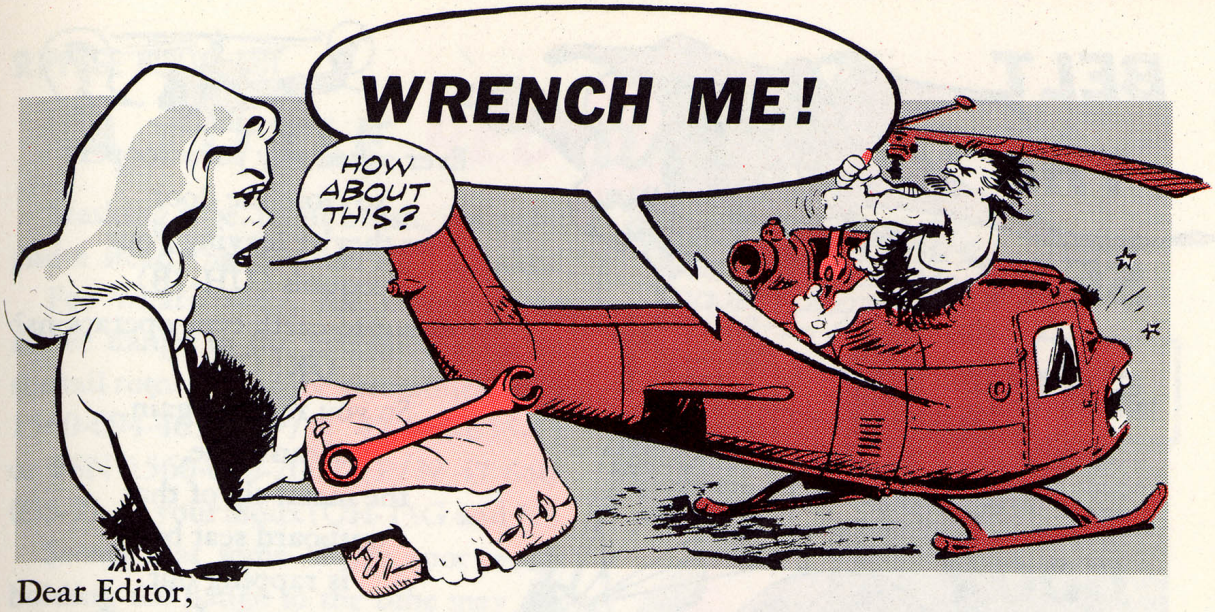
'Tain't hard to figure, either. Even with the cowl and rear latch secured there's very little clearance between the clamp and slat. So when the cowl's open, the spring-loaded latch sticks out and is a natural to hook the slat.

One of the best ways to guard against hooking a slat is to lower the slats past the latch **before** you start your maintenance on the early models.



No sweat on later models—they have a better latch that stays flush with the cowl so the slat won't hook it.

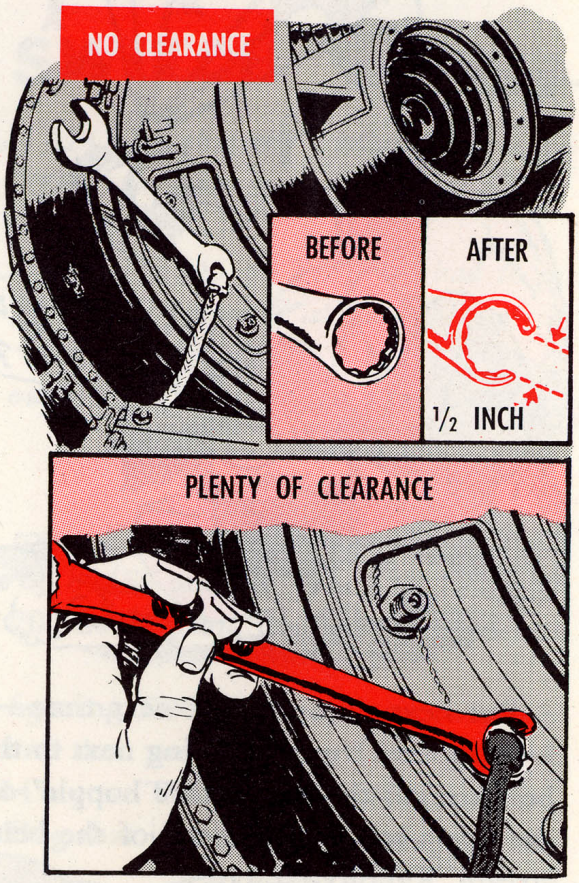
But to be on the safe side when checking, take a gander at the engine cowls to be sure they're buttoned up . . . wouldn't want **your** bird to be the one sidelined with injuries!



Dear Editor,

Anytime we removed and replaced the igniter plugs in our Iroquoise (UH-1A) for an engine change or replacement of a faulty plug, it was the same old story —what wrench to use so the plug or lead elbow wouldn't get damaged!

We tried a standard open-end but there wasn't enough clearance to get a grip on the plug. The wrench was too thick. You either had an interference problem at the housing or at the plug lead elbow . . . other open-end adjustable wrenches weren't any help either. And if you jam a wrench in there, the elbow really takes it on the chin.



What was needed was a special wrench. And since there isn't any such animal in our organizational tool kits, we made up our own.

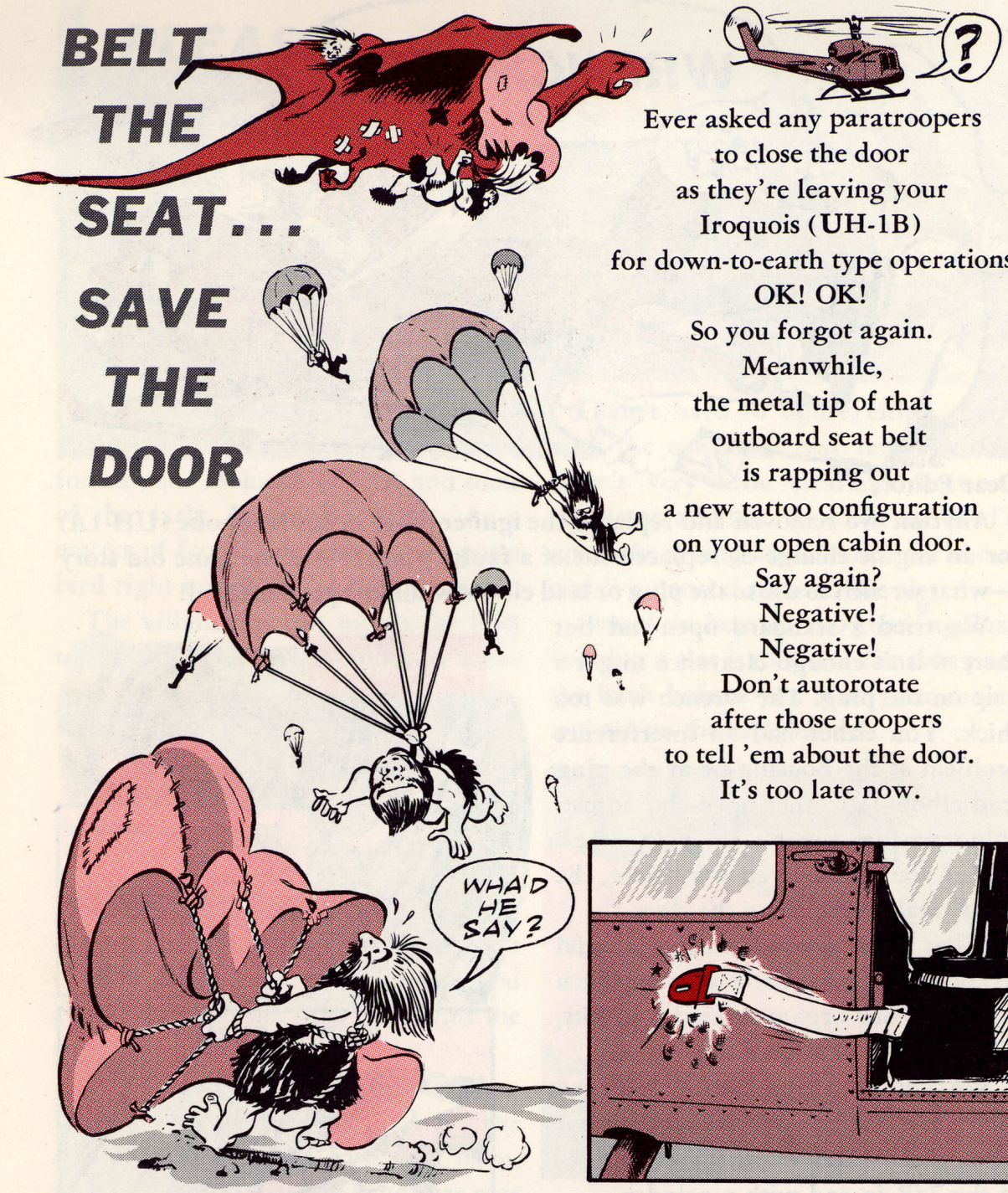
We got hold of an old, damaged 7/8 x 3/4-in box wrench and took out a half-inch wide piece from the center of the 7/8-in end with a grinder.

We haven't had one clearance problem with our plugs since we made up this thin-walled open-ender.

Sfc. James W. Reed
2nd Avn. Det., West Point, N. Y.

(Ed Note—Sounds OK for an interim fix as long as it's a spare wrench that gets the surgery . . . wouldn't want a tool in your kit to look like something it shouldn't.)

BELT THE SEAT... SAVE THE DOOR



Ever asked any paratroopers
to close the door
as they're leaving your
Iroquois (UH-1B)
for down-to-earth type operations?
OK! OK!
So you forgot again.
Meanwhile,
the metal tip of that
outboard seat belt
is rapping out
a new tattoo configuration
on your open cabin door.
Say again?
Negative!
Negative!
Don't autorotate
after those troopers
to tell 'em about the door.
It's too late now.

But next time—repeat next time—you can add to your pre-flight passenger briefing that troopers sitting next to the cabin doors are expected to fasten their belt around the seat before hoppin' off the bus. Just laying the belt ends up on the troop seat lets one end of the belt slide off and out into the fuselage slip-stream. Rappity-tap-tap!

Same thing happens during jungle operations with combat troops preparing to rappel to the ground with the old rope trick.

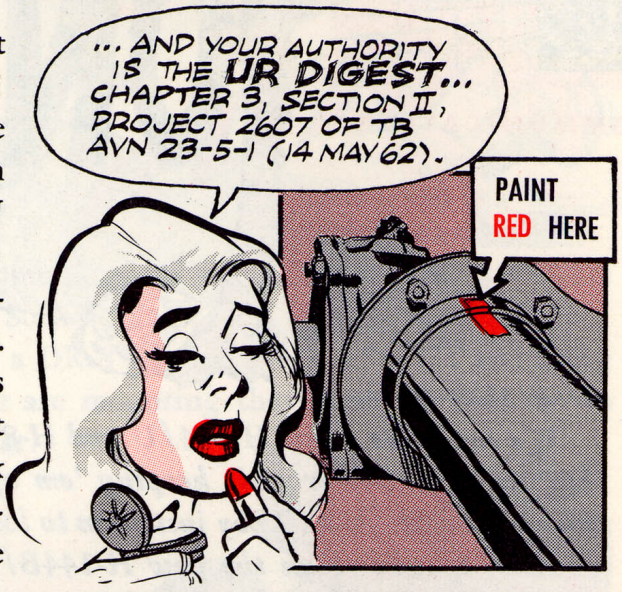
Remember! Tell 'em **before** they leave . . . "Belt the seat!"

A LITTLE RED DAB'LL DO YA

Masking tape, paint brush, red paint and a steady hand—that's all it takes!

For what? Why, for indexing the sleeve flange to the extension tube on the tail rotor drive tube assemblies, FSN 1560-694-4656 (P/N 47-640-055-1) or FSN 1560-650-7002 (P/N 47-640-055-7), of your Sioux (OH-13G and H).

Seems that some of the spot welds holding the flange to the tube may not be quite up to snuff. But the red index will let you know on each daily inspection if there's any movement of the flange—natch.



AV GAS SWITCH

Dear Windy,

TWX TCMAC-EM-05-02168 (18 May 62) says that the TBO for our Bird Dog (O-1) is shortened from 1200 to 700 hours after switching from 80/87 to 115/145 Av Gas. No sweat there.

But after racking up 100-odd hours using 115/145 on TDY we had to go back using 80/87 because we couldn't get the richer stuff at our commercial field.

So how do we figure those 100 hours on 115/145 toward the TBO?

Sp 5 B. D. S.

Dear Specialist B. D. S.,

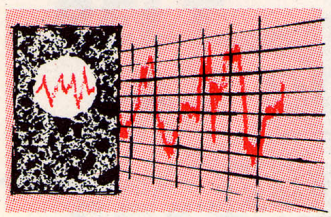
Just add the 100 hours on 115/145 toward your normal 1200-hour TBO. What you'll wind up with is 1100 hours on 80/87 and 100 hours on 115/145. The TWX says you can have a **total** of 700 hours using the heavy leaded bird juice.

Here's a couple of other examples of figuring TBO that may come in handy.

Say you have 300 hours using 80/87 and then you switch to 115/145. Since you're only allowed 700 hours on 115/145, your TBO would be 1000 hours.

'Course if you use 115/145 in a Bird Dog that just came out of the overhaul shop, the TBO is 700 hours—natch.

Windy Windsock



COMMUNICATIONS

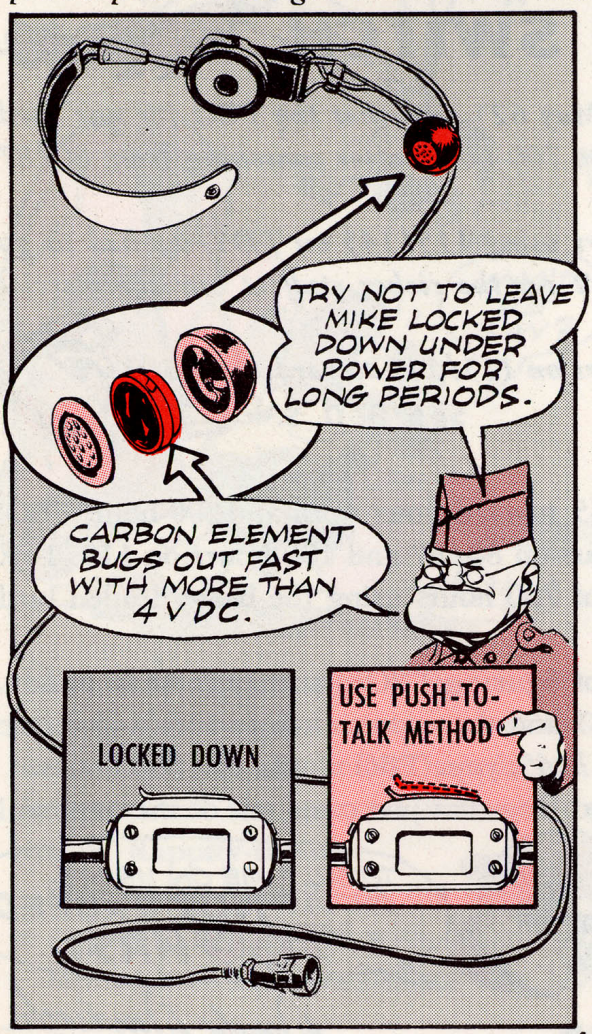
ON FOR TALKING ONLY

Dear Half-Mast,

We use quite a few H-144/U and H-81/U handset-headsets in our battalion, but we're having trouble keeping 'em operating because the microphone elements give up on us. They just seem to lose their effectiveness once they're in use.

Also, I don't think the new H-144B/U's are as good as the old ones. The plastic push switch gets broken a lot more often. Any new dope on this?

SFC R. T. T.



Dear Sergeant R. T. T.,

Chances are you're operating those sets with the push-to-talk switches locked ON. This is not so bad by itself . . . but it sure sets up a situation that can take a turn for the worse. The microphone element is made of carbon, which sorta bugs out when more than four volts DC is applied to it. And it bugs out quite a bit faster if the mike has been locked down under power for long periods.

So, first of all, check your power source and make sure the sets are not getting any more than three or four volts. And whenever possible, keep the switch unlocked and use the push-to-talk method the way it was meant to be used.

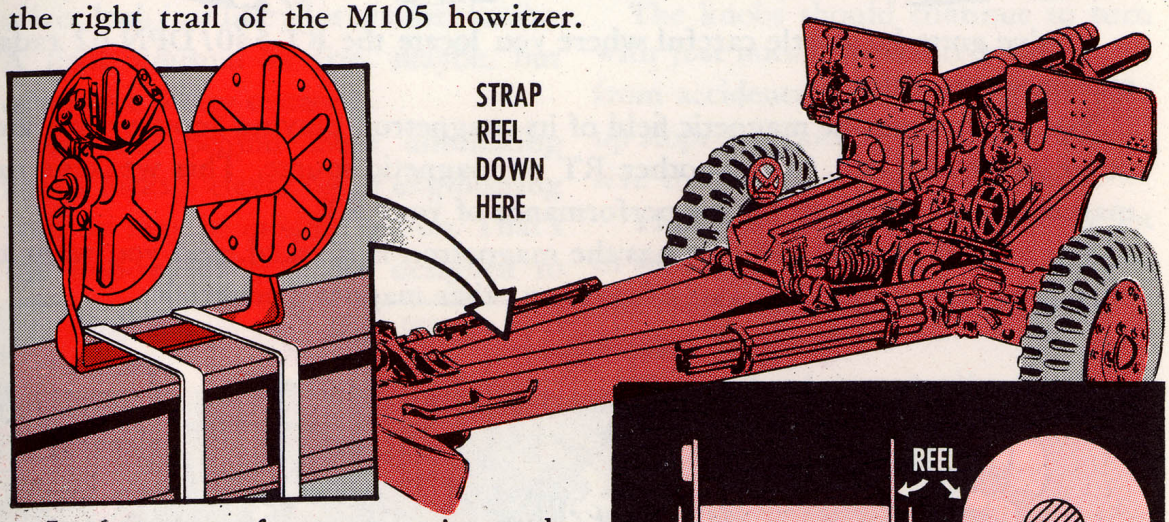
As for the new H-144B/U's, you're right. The switch lever's not very rugged . . . but they're already working to improve it.

Half-Mast

Dear Editor,

Anything that speeds up wire communications suits us neat, and we figure other outfits share those sentiments. So here goes.

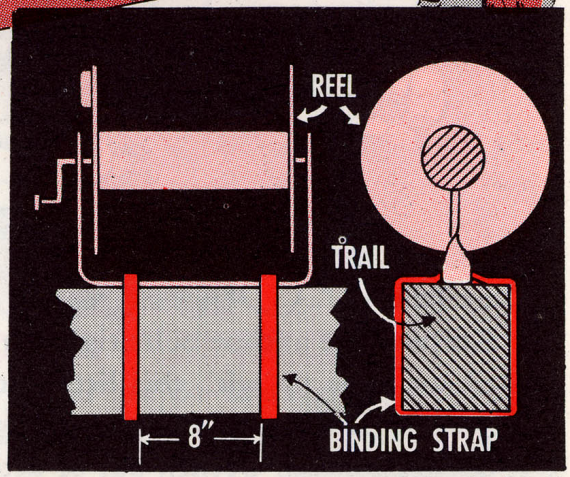
It's all about the RL-39 reel, with a DR-8 spool and MX-155/GT switching kit attached to it. Batteries in our unit are mounting that assembly directly on the right trail of the M105 howitzer.



In that spot, of course, you're ready to unreel almost before you get your piece into position. Which is OK in my book.

All that's needed are two heavy binding straps to secure the reel bracket to the trail. Put 'em about eight inches apart.

It holds the reel real tight—and still can be put on and taken off pronto without so much as scratchin' the paint on the trail.

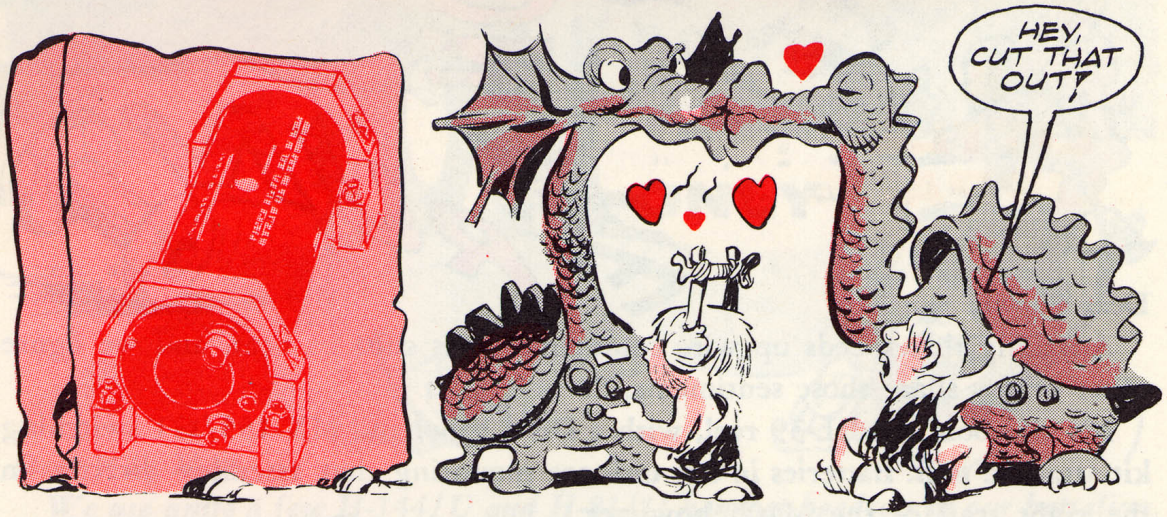


Our CO sounded out "affirmative" loud and clear, and we've been reeling in good results ever since.

Sgt. Russell Quaccia
Raritan Arsenal, N. J.

(Ed Note—No doubt about it, Sarge, you're on the right trail to speedy wire communications. But since no official word ever came along about mounting the reel directly on the howitzer itself, a temporary mounting like yours will always need a loud and clear approval from the unit commander.)

NO MAGNETIC MIXING

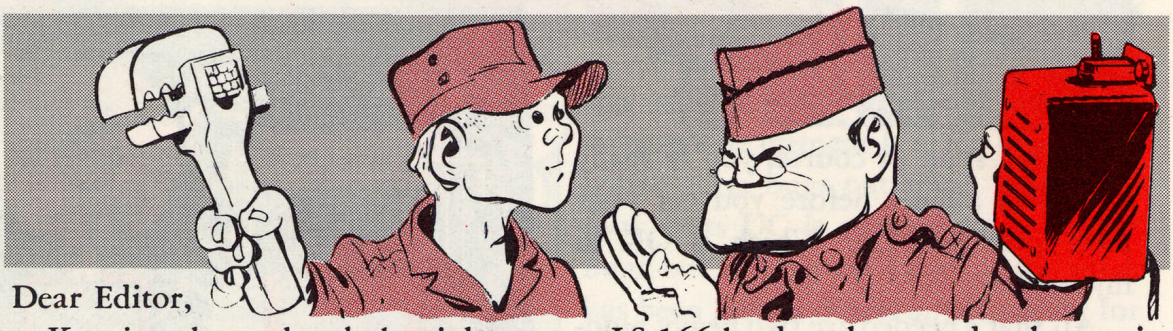


You've gotta be a little careful where you locate the RT-540/DPN-62 radar receiver-transmitter.

You don't want the magnetic field of its magnetron playing footsie with any other magnetic field from another RT or magnetic source. This weakens the magnets and cuts down on the performance of your RT.

The side of the RT-540 that has the magnetron is marked, and you want to keep it at least 2½ inches away from any other magnetic materials.

THE RIGHT TOOL

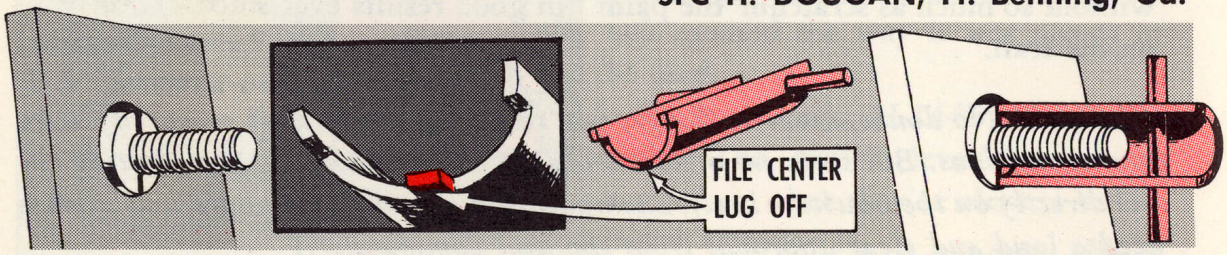


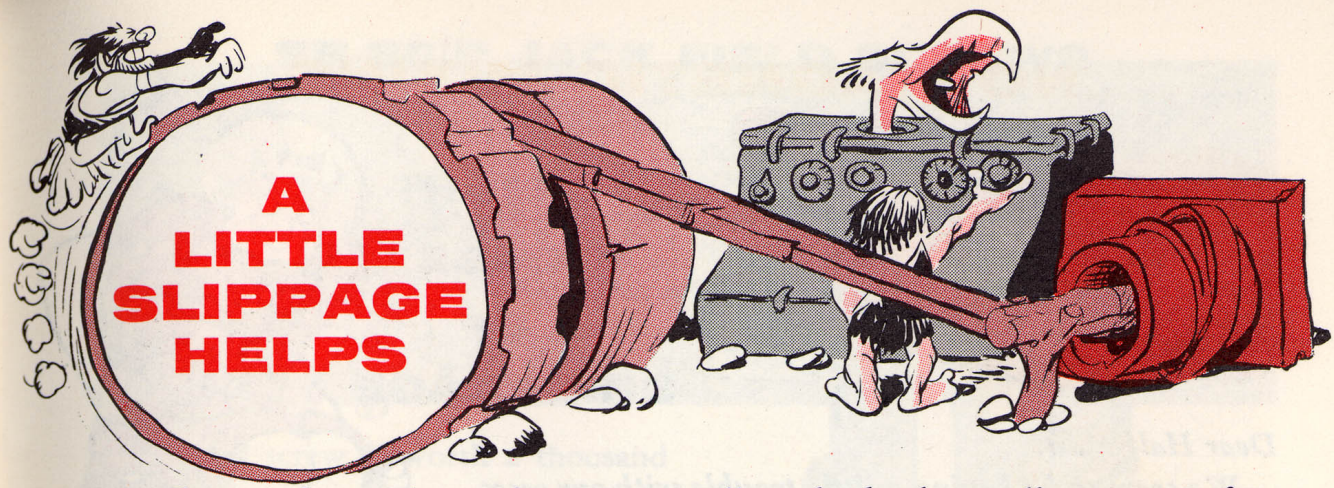
Dear Editor,

Keeping the anchor bolts tight on our LS-166 loudspeakers used to be a pain until we came up with this little idea. We found that by filing off the center lug on the smallest of our spanner wrenches, it'd just fit the anchor bolt screw. It doesn't put the wrench out of action, either.

Until we tried this, we used to foul up the loudspeaker screw by trying to use a screwdriver and hammer, etc.

SFC H. DOUGAN, Ft. Benning, Ga.

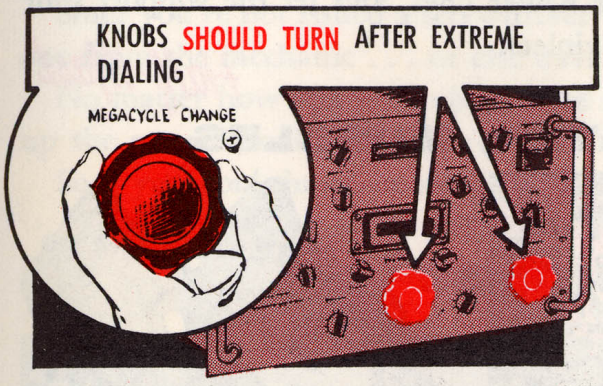




A LITTLE SLIPPAGE HELPS

When you're staring at 'em eye-to-eye, the kilocycle and megacycle change knobs on your R-390/URR radio receiver look just like a lot of other knobs. A little unusual in size, maybe, but otherwise pretty common.

Ah, but behind those unblinking knobs lurks a clever bit of engineering your set may be missing out on. That's the stop-releasing device designed to allow the knobs to slip or turn after you've reached the end of the frequency bands.



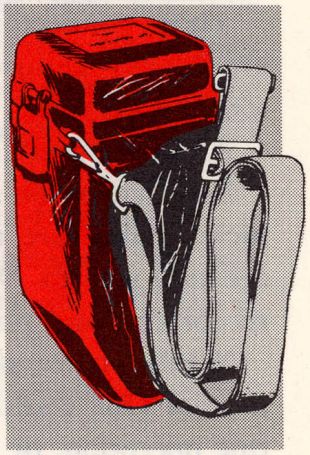
The knobs should continue to turn with just normal pressure to keep you from accidentally over-riding the pile-up stops and causing all sorts of expensive trouble in the Vfo subchassis.

This built-in slip action saves a lot of wear and tear on the pile-up stops—but only when the knobs are properly adjusted for it.

If your knobs aren't slipping like a good knob should, tell your repairman. He'll take his long, slim screwdriver and adjust 'em so they'll carry the load —but still slip rather than put more pressure on the stops.

A CASE SCRATCHED

One case scratched is just about what you've got the first time you get careless with the hard plastic case for the TA-1/PT Telephone.



Of the three types for the TA-1/PT, the hard case is about the easiest to break. But, when it's workin' for you, it'll give its all to protect the telephone.

A short drop or a sharp crack any time of the year may fracture it, but the case needs extra care in cold weather. The cold makes it brittle, and brittle jobs need careful handling.

So you might try some extra gentleness in winter—even when you're just settin' it down.

Dear Half-Mast,

We seem to be having a little trouble with our cases, CY-1277A/PT, for telephone set TA-312/PT. When they get damp or wet they shrink so much the zipper won't close.

Is there, or has there been a solution to this problem?

SFC T. H. M.

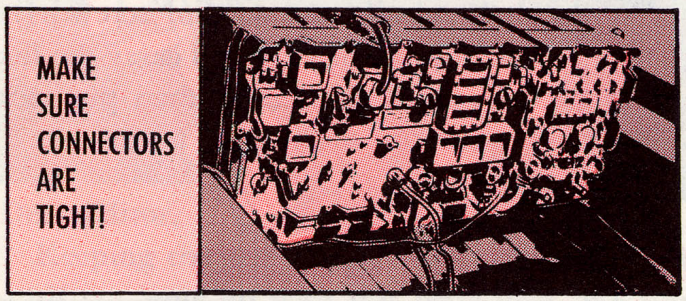
Dear Sergeant T. H. M.,

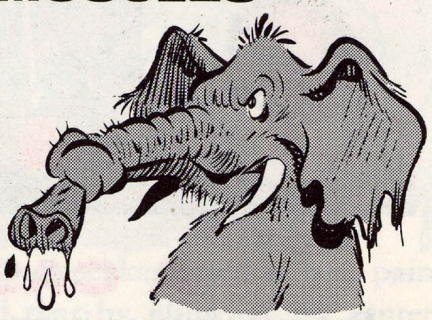
There's a fix for this in TB SIG 213-31 (25 May 60). It calls for sewing in a one-inch wide strip of webbing on each side of the zipper whenever the zipper has.to be replaced.

This work is generally done at the support level, so about the only thing you can do is turn in the shrinking cases for newer ones, and let the support unit have a crack at fixing up the shrinking violets.

Half-Mast

HOLD YOUR WATER, MUSCLES





Those connectors on your radio set are finicky things. They like to get screwed up snug . . . but not too tight.

And they don't like water!

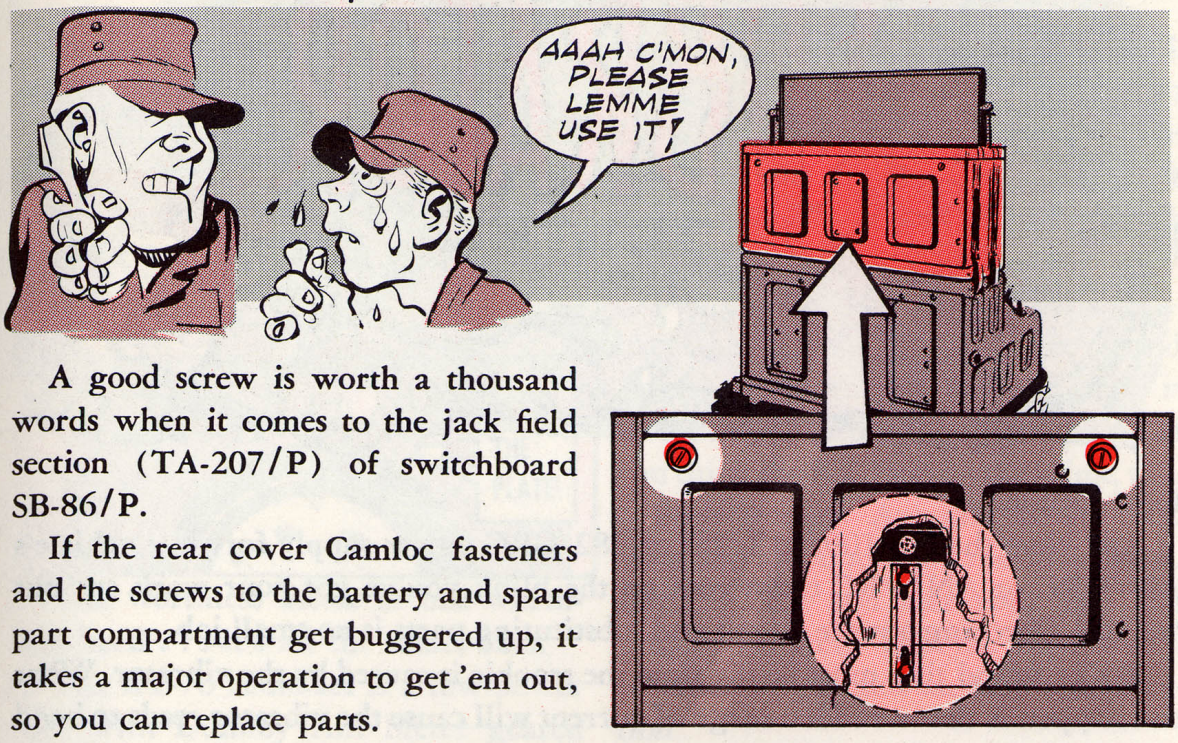
Like when you're washing your vehicle, make sure the cable connectors are snugged up. Water loves to get in receptacles and pull a corrosion act.

While you're snuggin' up the connectors (for washing the vehicle, routine operation, or what have you), go easy with the muscles. Just enough pressure to snug 'em. Too much, and you're liable to rip out some insulation.

Insulator trouble or corrosion can put you in the same kinda shape . . . like out of business.

'Nother point to ponder. When you're washin' your vehicle, keep that high-pressure water away from the radio set. It operates best when it's high and dry.

SB-86/P JACK FIELD SCREWS



A good screw is worth a thousand words when it comes to the jack field section (TA-207/P) of switchboard SB-86/P.

If the rear cover Camloc fasteners and the screws to the battery and spare part compartment get buggered up, it takes a major operation to get 'em out, so you can replace parts.

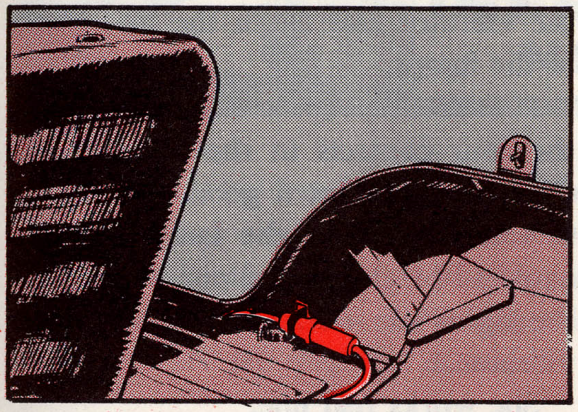
And it's mighty easy to damage the screw heads when you don't use the right screwdriver.

Since you're not issued a screwdriver with the equipment, you'll have to get one from the mechanic . . . or else have him do the unscrewing for you.

No matter how you try to improvise a screwdriver, the chances are you'll foul up the screw heads and cause a lot of sweat all around.

So if you don't have the right tool, send for the man who has.

FEED 'ER RIGHT

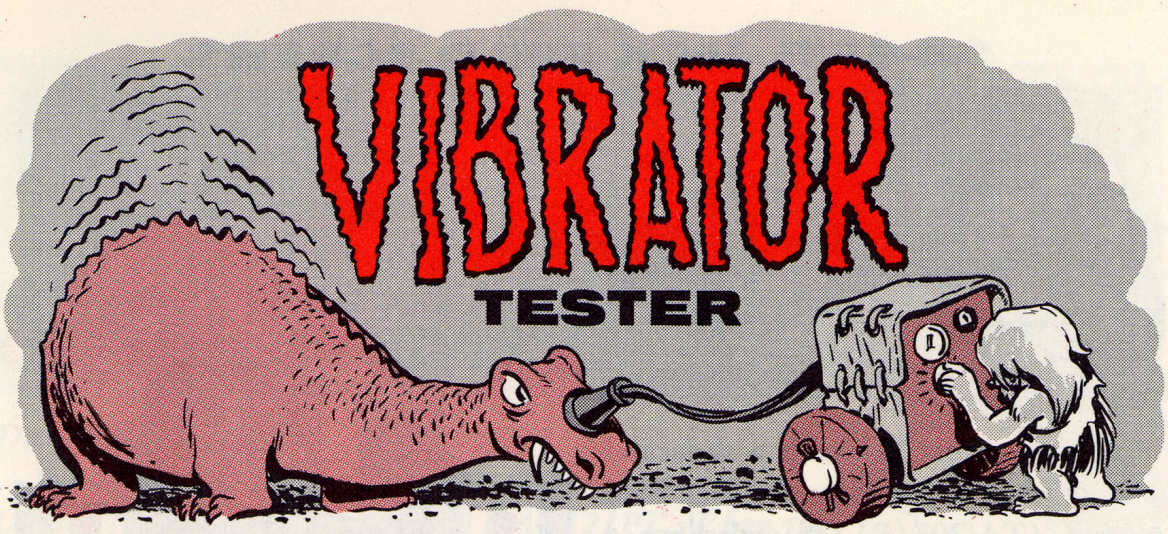


That radio set in your G740 or G758 series vehicle is a particular lady in her feeding habits, and she might get a little burned up if you slip her a substitute.

She likes to get her juice thru her own specially designed kit . . . which goes by Radio Power Feed Kit. The RPFK is a cable assembly which goes between your radio set and the vehicle battery, and it's important. MWO ORD G1-W105 (8 May 57) gives you the kit and installation instructions.

The kit eliminates tying into the battery with direct wires—a fire hazard, among other things.

FSN 2590-693-4224 will get you the kit from Ordnance.

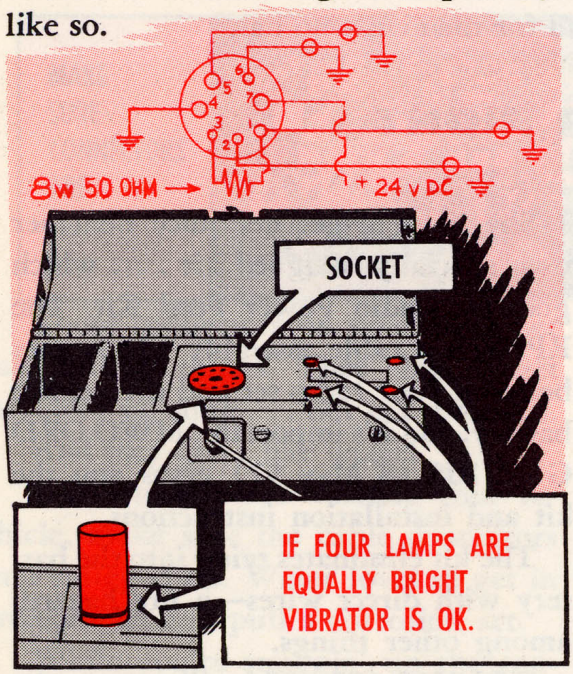


Dear Editor,

Any time the PP-109, 112, 281 or 282/GRC power supply for your vehicle's AN/GRC or AN/VRC radio goes on the blink you've got your work cut out for you. Checking out the circuit and substituting parts is no small job.

We've found that most of the time the trouble is caused by the vibrator. What can happen is that a sudden surge of current will cause the vibrator reeds to bend beyond the normal vibrating range, coils to short out and points to burn or freeze.

To save a lot of time and elbow grease we made this simple 24-volt tester in only a couple of hours for checking 6.5-12 and 24-volt vibrators. All we used was an electron tube socket, FSN 5935-171-3129, four LM-38 or No. 313 lamps, FSN 6145-155-8714, three feet of No. 18 AWG wire, six feet of rip cord wire and two suitable alligator clips. Any sort of chassis will do. The wiring goes like so.



To use the tester you hook it up to the 24-volt power supply of your vehicle with the alligator clips, plug in the vibrator and check the brightness of the lamps.

If the four lamps are equally bright, the four contacts in the vibrator are OK so you've got a good one. But if any one or all of the lamps are not equal in brightness, or one or more of the lights are out, you've got a bum vibrator.

She works real fine.

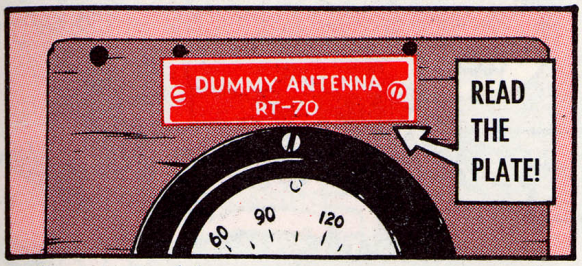
Charles E. McDonald, NY ARNG
Camp Drum, N. Y.

(ED NOTE—Looks like a handy little gem to have around. You could also use it to check for a possible "dud," fresh out of a new container.)

LOOK-ALIKE DUMMIES

Ever hit a thin wire brad with a 12-pound sledge?

Well, slugging the RT-70/GRC Dummy Antenna Milliamperes Meter with the load from a RT-66, -67 or -68/GRC Radio Set will get you about the same results.



One worthless meter or one worthless brad . . . it's all the same, Sam.

The RT-70 radio set is a low-power job, with Dummy Ant Meter geared accordingly.

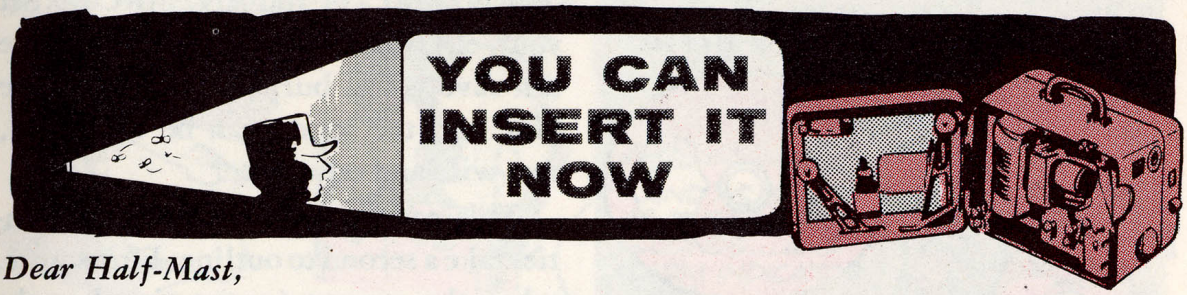
But the whack the medium power RT-66 thru 68 gives its own Milliamperes Meter is 16 times harder than the meter for the RT-70 is built to take.

Like so . . . the RT-70 Dummy Antenna meter takes shots from ½ to 1 watt. The RT-66 meter range is 2 to 16 watts. Feed those big ones to the RT-70 meter and you'll damage it every time. If she don't blow fast enuf, the damage is gonna be bad!

Using the RT-66 meter to get a reading from the RT-70 radio set would give you a reading so low that it wouldn't do a bit of good. Might make you think the RT-70 is on the blink, tho.

Both Dummy Antenna meters look alike and are mounted in similar boxes. But . . . lest you tear your hair and grind your teeth worryin' over which is which . . . there's an easy identification.

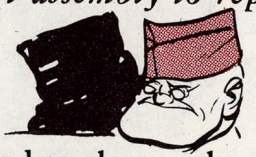
Every meter box has a nameplate just above the meter itself. One look will tell you whether it's for the RT-70 or the RT-66 etc. The right set will be identified just under the words "DUMMY ANTENNA."



Dear Half-Mast,

We are having trouble locating the right part for the projector AS-2(1). This projector has a new-type input connector receptacle, FSN 5935-092-1032. Every time we order the connector plug for it we get the old type, FSN 5935-201-7902.

What we need is the P-P3 socket insert assembly to replace the old P-3. Is there an FSN for this new assembly?

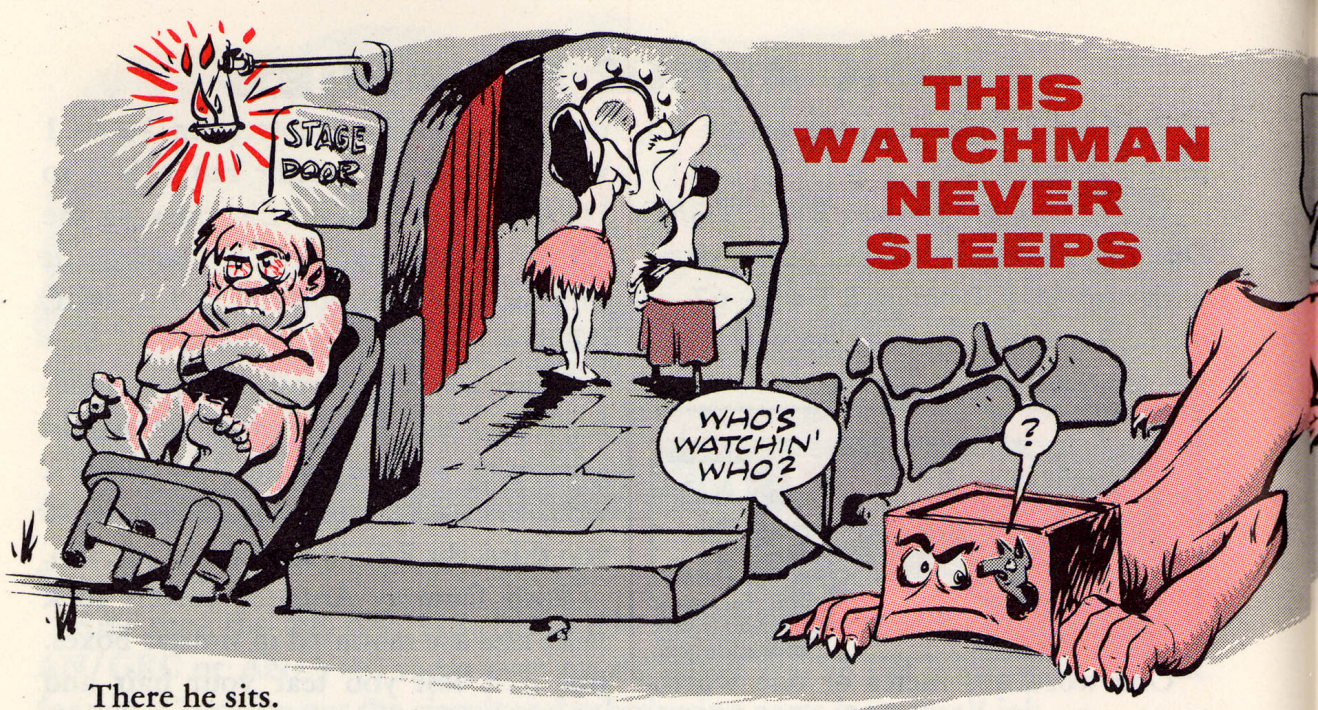


Sgt. D. J. K.

Dear Sergeant D. J. K.,

The P-P3 socket insert assembly you need to change the connector plug from non-polarized to polarized goes under FSN 5935-092-1033, Cannon Part No. 20494. It's a Signal item.

Half-Mast

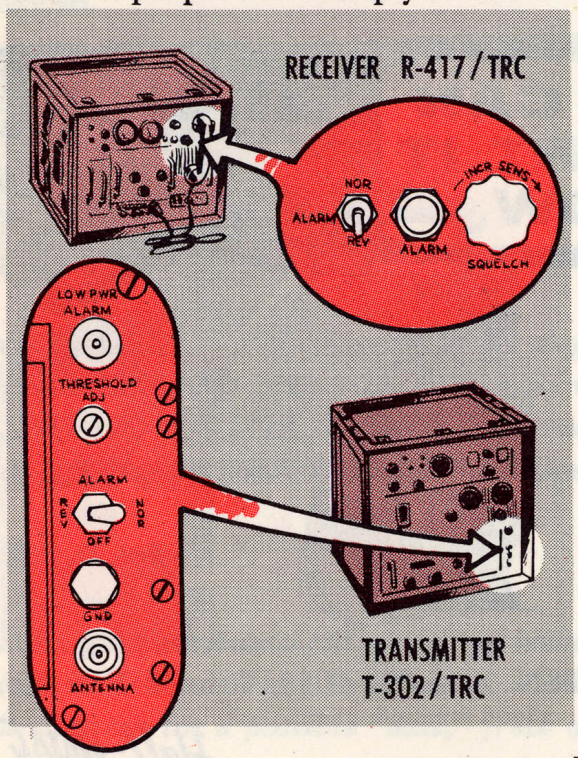


THIS WATCHMAN NEVER SLEEPS

There he sits.

Patiently . . . around the clock . . . every day, for as long as you want him to, he strains his electronic eyes and ears while you save yours for other things.

He's more dependable than Old Rover, because . . . like the super watchman he is . . . he never sleeps. His sole purpose is to keep you in business. All he asks in return is that you spend a minute or two putting him on the job. Then, you forget him. If he wants you he'll let you know . . . fast.

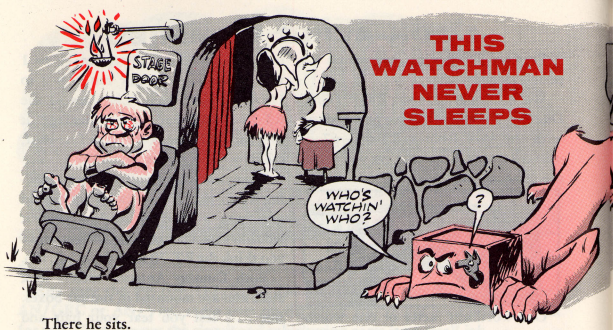


That, in short, is the story of the Low Power Alarm System for your T-302/TRC and R-417/TRC setup in Radio Set Group OA-1387/GRC—a component of your radio set series AN/TRC-24, AN/MRC-54 and AN/MRC-69. Set your electronic watchman up, and he can save you a burned out set. Ignore him, and the lesson can be expensive, cost-wise and otherwise.

This easy-to-set-up watchman's duties take a second to outline: F'rinstance, when the current (proportional to the RF power to the antenna) gets too low, a failure is indicated in the transmitter RF power output.

Bingo! The watchman's alarm circuit closes, his buzzer sounds and his lamp lights. Naturally, you come runnin' over and trace down the trouble before it gets serious.

Now let's say you didn't take time

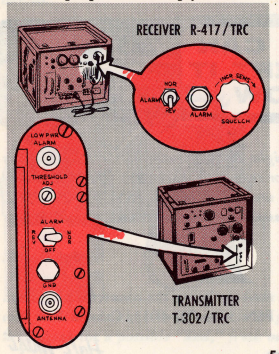


THIS WATCHMAN NEVER SLEEPS

There he sits.

Patiently . . . around the clock . . . every day, for as long as you want him to, he strains his electronic eyes and ears while you save yours for other things.

He's more dependable than Old Rover, because . . . like the super watchman he is . . . he never sleeps. His sole purpose is to keep you in business. All he asks in return is that you spend a minute or two putting him on the job. Then, you forget him. If he wants you he'll let you know . . . fast.

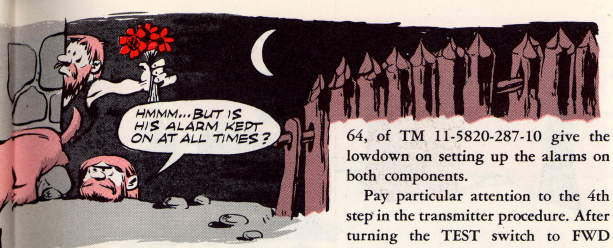


That, in short, is the story of the Low Power Alarm System for your T-302/TRC and R-417/TRC setup in Radio Set Group OA-1387/GRC—a component of your radio set series AN/TRC-24, AN/MRC-54 and AN/MRC-69. Set your electronic watchman up, and he can save you a burned out set. Ignore him, and the lesson can be expensive, cost-wise and otherwise.

This easy-to-set-up watchman's duties take a second to outline: F'rinstance, when the current (proportional to the RF power to the antenna) gets too low, a failure is indicated in the transmitter RF power output.

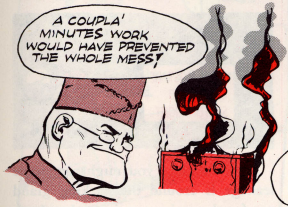
Bingo! The watchman's alarm circuit closes, his buzzer sounds and his lamp lights. Naturally, you come runnin' over and trace down the trouble before it gets serious.

Now let's say you didn't take time



to put your watchman on the job. You tune up the transmitter (T-302) and maybe check it every 3 or 4 hours while you work on something else nearby. But, while you're gone, a weak tube lowers the power output. The tube forces others to burn out . . . or causes other damage.

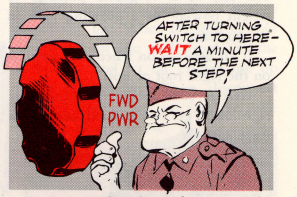
You come back at "check time" to find the radio set smoking . . . or without power. You're in for real trouble.



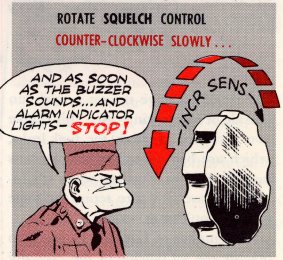
Those coupla minutes, of course, include the alarm on the receiver (R-417), which helps you protect your buddy's set at the next relay station. He may have forgotten his alarm. If he goes off the air, your alarm buzzer alerts you. You can give him a call and warn him of trouble on his set.

Para 40, page 62, and para 47, page 64, of TM 11-5820-287-10 give the lowdown on setting up the alarms on both components.

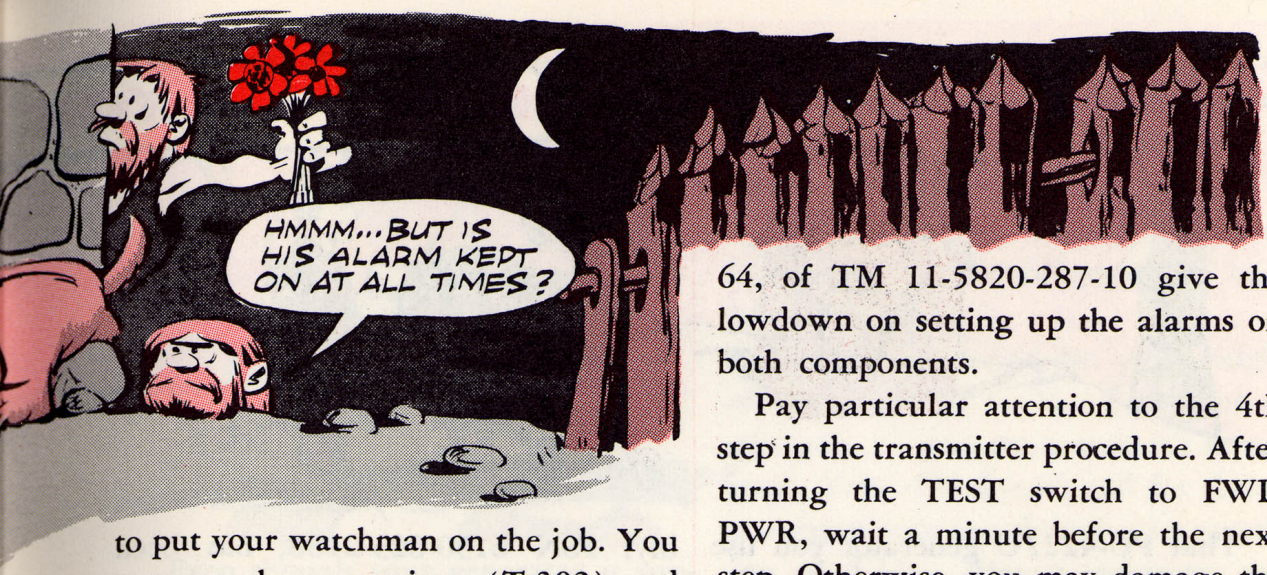
Pay particular attention to the 4th step in the transmitter procedure. After turning the TEST switch to FWD PWR, wait a minute before the next step. Otherwise, you may damage the PP-685 power supply.



Same goes for the 3rd step on the receiver. Rotate the SQUELCH control

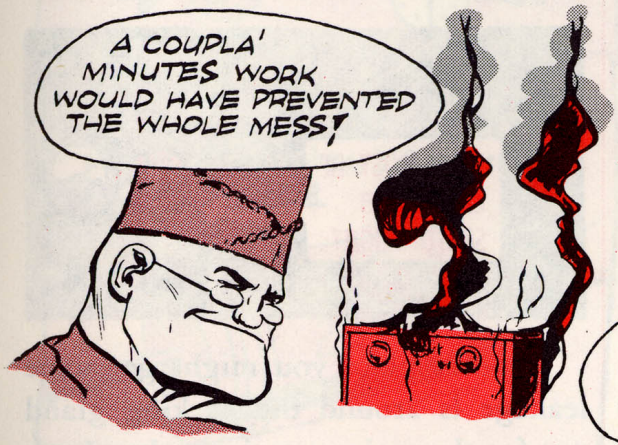


counterclockwise slowly . . . and STOP as soon as the buzzer sounds and the ALARM indicator lights.



to put your watchman on the job. You tune up the transmitter (T-302) and maybe check it every 3 or 4 hours while you work on something else nearby. But, while you're gone, a weak tube lowers the power output. The tube forces others to burn out . . . or causes other damage.

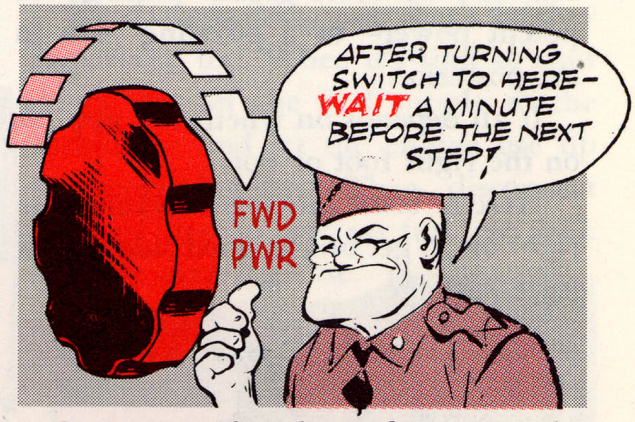
You come back at "check time" to find the radio set smoking . . . or without power. You're in for real trouble.



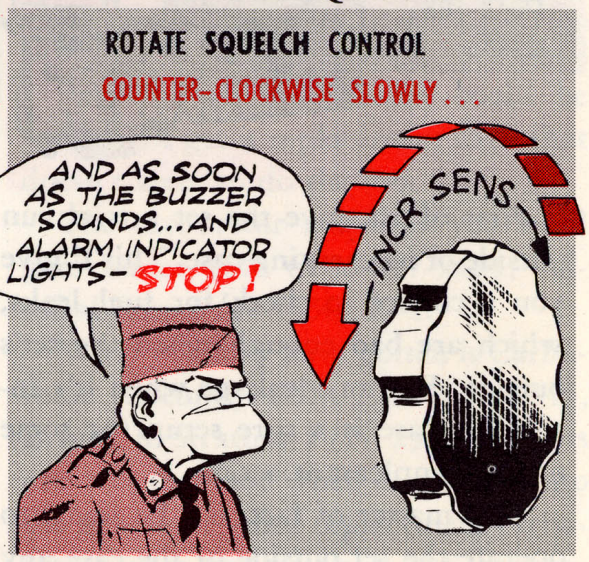
Those coupla minutes, of course, include the alarm on the receiver (R-417), which helps you protect your buddy's set at the next relay station. He may have forgotten his alarm. If he goes off the air, your alarm buzzer alerts you. You can give him a call and warn him of trouble on his set.

Para 40, page 62, and para 47, page 64, of TM 11-5820-287-10 give the lowdown on setting up the alarms on both components.

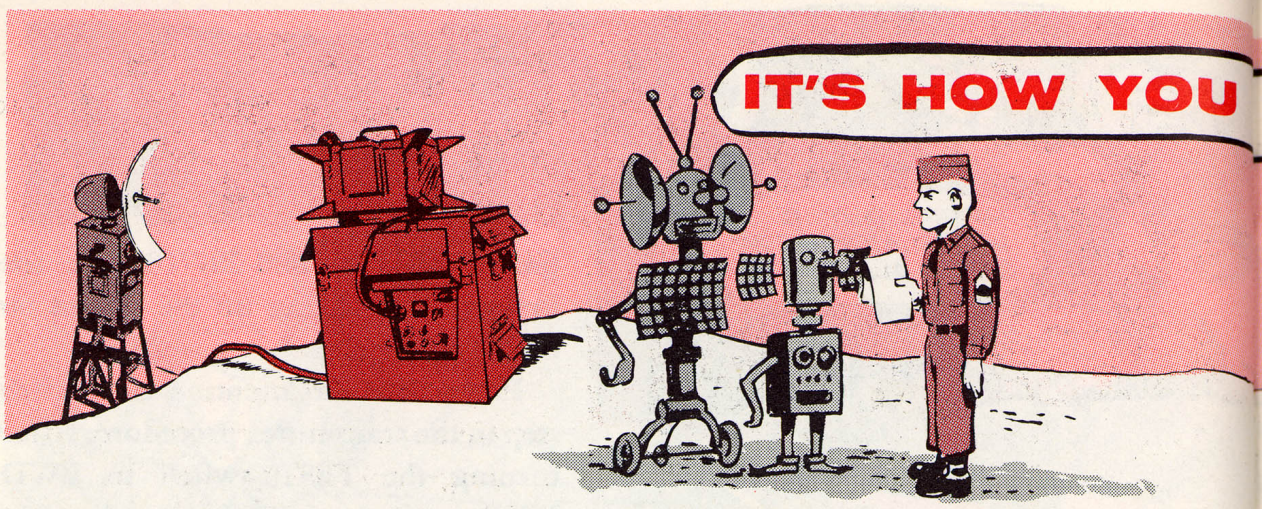
Pay particular attention to the 4th step in the transmitter procedure. After turning the TEST switch to FWD PWR, wait a minute before the next step. Otherwise, you may damage the PP-685 power supply.



Same goes for the 3rd step on the receiver. Rotate the SQUELCH control



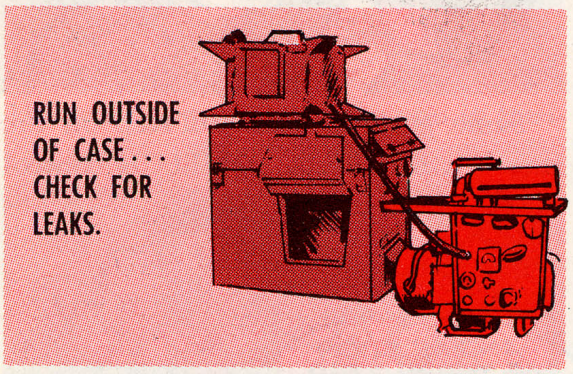
counterclockwise slowly . . . and STOP as soon as the buzzer sounds and the ALARM indicator lights.



That PU-422/U generator you use with your AN/TPS-21 and -33 radar sets can be a 60-pound package of potent power—or a puzzling pain in the posterior.

It all depends on whether it gets off on the right foot or not.

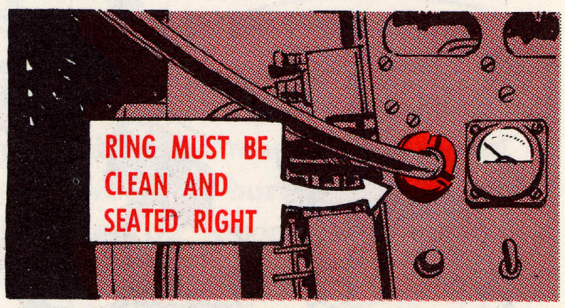
Here're some things you want to do right off to get on the good side of this little package.



First of all, give the set a trial run outside of its carrying case. This'll give you a chance to check for fuel leaks, which are bad enough when the set's outside. But any leakage when it's inside the case is a sure setup for some mighty unpleasant action.

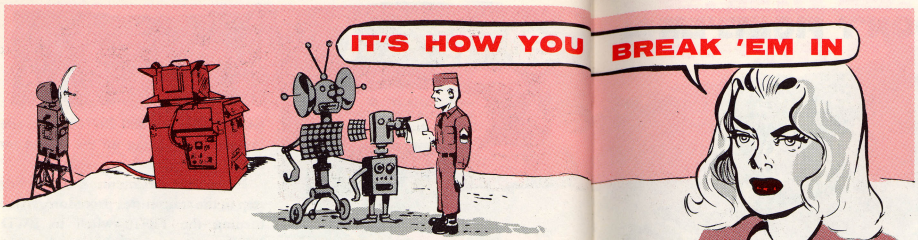
As a matter of fact, it'd be smart to operate the set outside of the case any time the tactical situation permits . . . as they say. The rectifier-diode assembly, FSN 6130-823-2188, has been known to fail . . . and it could be because of the heat build-up when the set is operated inside the case.

The quick disconnect fuel line check valve has an O-ring that should be eyeballed real close. Any dirt or gook that upsets this O-ring can cause a fuel leak. Which is just what you don't want—inside or outside the case. Make sure the ring's clean and seated right.



Another place you might get some leakage is around the packing gland nut for the main metering valve. Look it over real close and tighten up if necessary.

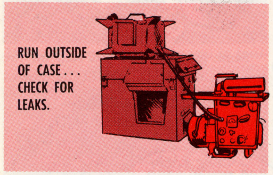
IT'S HOW YOU BREAK 'EM IN



That PU-422/U generator you use with your AN/TPS-21 and -33 radar sets can be a 60-pound package of potent power—or a puzzling pain in the posterior.

It all depends on whether it gets off on the right foot or not.

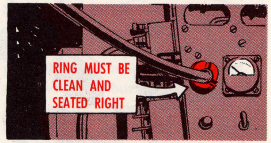
Here're some things you want to do right off to get on the good side of this little package.



First of all, give the set a trial run outside of its carrying case. This'll give you a chance to check for fuel leaks, which are bad enough when the set's outside. But any leakage when it's inside the case is a sure setup for some mighty unpleasant action.

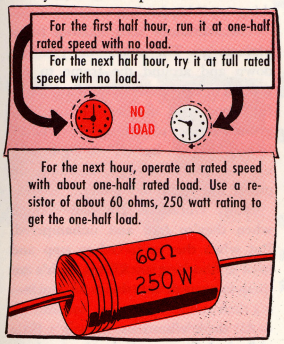
As a matter of fact, it'd be smart to operate the set outside of the case any time the tactical situation permits . . . as they say. The rectifier-diode assembly, FSN 6130-823-2188, has been known to fail . . . and it could be because of the heat build-up when the set is operated inside the case.

The quick disconnect fuel line check valve has an O-ring that should be eyeballed real close. Any dirt or gook that upsets this O-ring can cause a fuel leak. Which is just what you don't want—inside or outside the case. Make sure the ring's clean and seated right.



Another place you might get some leakage is around the packing gland nut for the main metering valve. Look it over real close and tighten up if necessary.

Even though your generator is supposed to be able to operate at full rated load when you get it, it pays to start slowly and work up to full load.



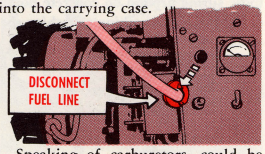
Now your TM 11-5840-229-15, with Changes 1 and 2, tells you to add oil every 15 hours and to change oil every 30 hours. All well and good when your little number is all broken in and hot to go.

But for the first 50 hours or so you want to make a little more with the bedside manner. Change the oil every eight hours of operation . . . and check the oil level every hour until you feel you can trust her.

You use OE30 engine oil above freezing and OE10 below. She'll hold 18 ounces.

Add a half-pint of the same weight of engine oil to each two gallons of gasoline . . . and make sure it's mixed good. Your TM doesn't call for this—but experience has shown it's a spanking good idea. Almost necessary, you might say.

Here's something else that's mighty important, too. When it's time to shut down, cut off the fuel supply to the carburetor and let the engine use up the remaining fuel. Then, disconnect the fuel line so that no fuel can leak into the carrying case.

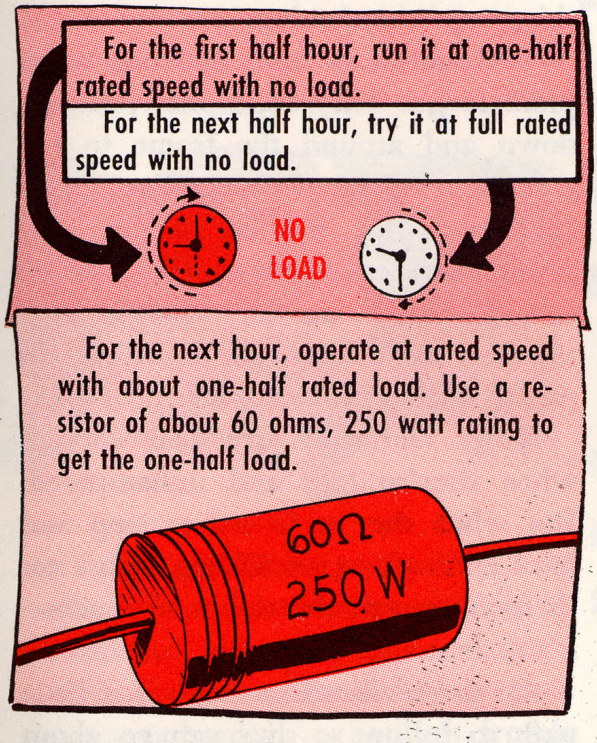


Speaking of carburetors, could be you might get a replacement carb that doesn't seem to do the job.

The carburetor assembly you need goes under FSN 6116-897-5401, Admiral Corp P/N 5550220-1.

What you may have gotten is Carburetor Assembly FSN 2910-K68-0045, Briggs & Stratton P/N 296108. This one was modified when it was put into the generator—but replacement carburetors were not. So your B&S replacement may not do the job. Use the other one.

Even though your generator is supposed to be able to operate at full rated load when you get it, it pays to start slowly and work up to full load.



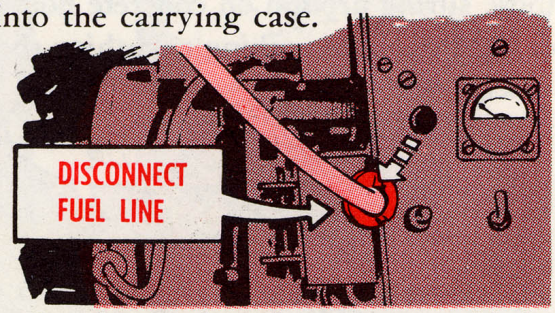
Now your TM 11-5840-229-15, with Changes 1 and 2, tells you to add oil every 15 hours and to change oil every 30 hours. All well and good when your little number is all broken in and hot to go.

But for the first 50 hours or so you want to make a little more with the bedside manner. Change the oil every eight hours of operation . . . and check the oil level every hour until you feel you can trust her.

You use OE30 engine oil above freezing and OE10 below. She'll hold 18 ounces.

Add a half-pint of the same weight of engine oil to each two gallons of gasoline . . . and make sure it's mixed good. Your TM doesn't call for this—but experience has shown it's a spanking good idea. Almost necessary, you might say.

Here's something else that's mighty important, too. When it's time to shut down, cut off the fuel supply to the carburetor and let the engine use up the remaining fuel. Then, disconnect the fuel line so that no fuel can leak into the carrying case.

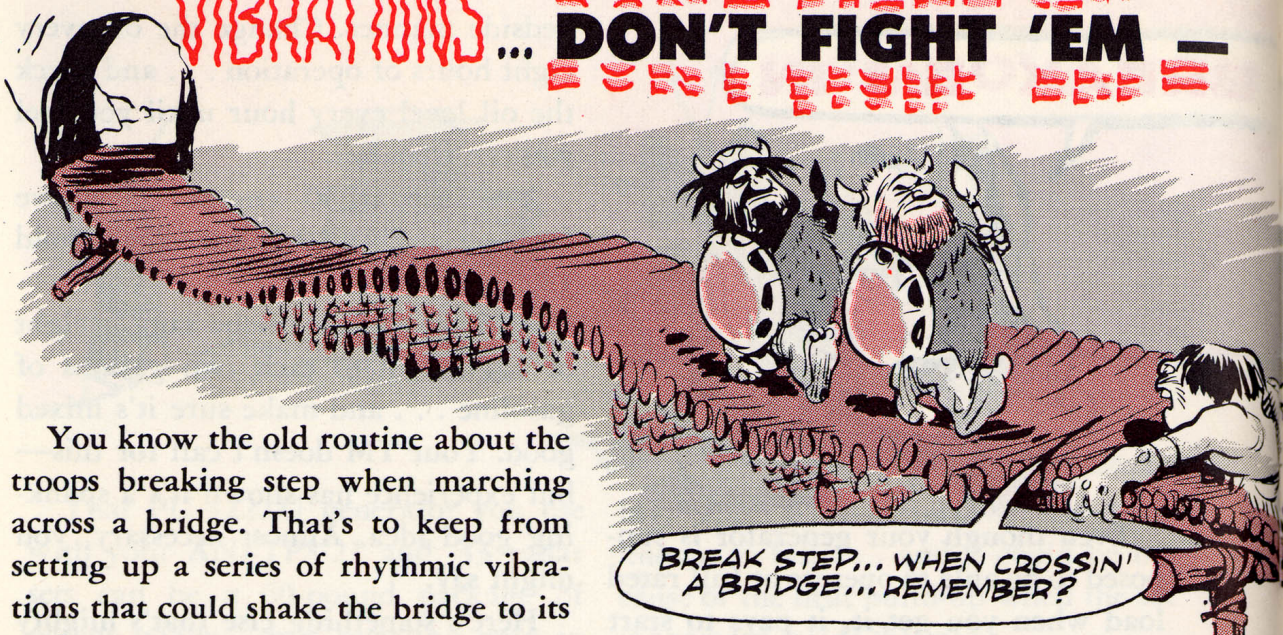


Speaking of carburetors, could be you might get a replacement carb that doesn't seem to do the job.

The carburetor assembly you need goes under FSN 6116-897-5401, Admiral Corp P/N 5550220-1.

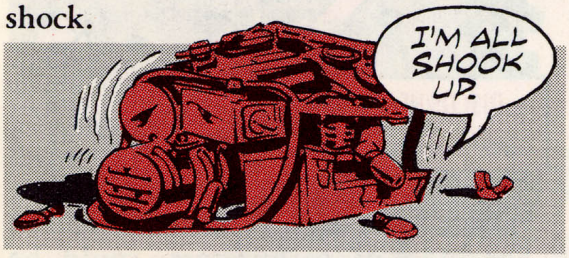
What you may have gotten is Carburetor Assembly FSN 2910-K68-0045, Briggs & Stratton P/N 296108. This one was modified when it was put into the generator—but replacement carburetors were not. So your B&S replacement may not do the job. Use the other one.

VIBRATIONS... DON'T FIGHT 'EM—



You know the old routine about the troops breaking step when marching across a bridge. That's to keep from setting up a series of rhythmic vibrations that could shake the bridge to its underpinning.

Well, if those little ol' vibrations can do that to that big ol' bridge, just think what they can do to your engine-driven power units and generators. Especially those sitting around on concrete floors or hardtop, with nothing to cushion the shock.



They can reduce that generator to a pile of throbbing and gasping metal, that's what—and in pretty short order. This is especially true of those 15KW and smaller.

Some of these generators and power units were designed with the thought in mind that they'd be operated in a trailer or truck. This way they could get the benefit of the tires, springs and shocks of the vehicle.

All well and good.

But when you have to operate the unit on the cold-cold ground, hardtop or concrete floor, some mighty nasty things start happening.

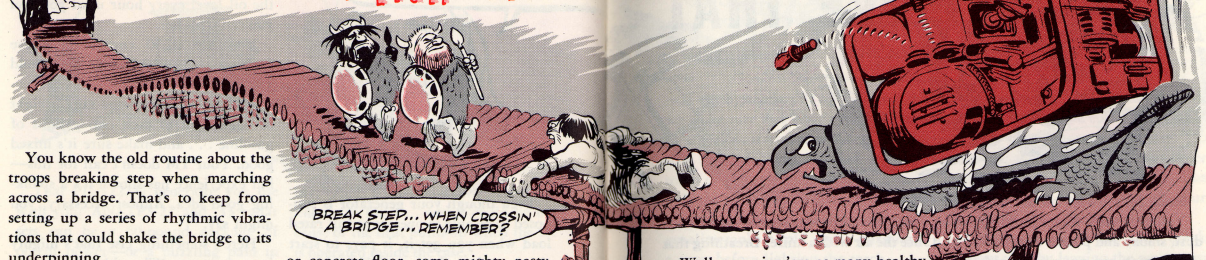
The vibrations start looking for a place to go. They start pitty-pattying down and around the frame to the ground in a perfectly natural and playful mood. But that hard-hearted ol' ground refuses to pick up the cadence. It says "beat it, buster," so right back up the frame they go, building up power like steam in a boiler.

Now, vibrations are bad enough when they're free and unhampered. But when they're forced to stop and back up they're giant killers. So it's not their movement that hurts so much—it's their sudden stoppage.

All these vibrations want is a little path to follow so they can go about their business. But when you bottle 'em up, they get a little frantic and start looking for the panic button. And they have one big ace up their sleeves—they can't be stopped. You either play along with 'em or your equipment suffers the consequences.

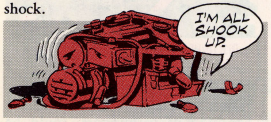
So how do you play ball with 'em?

VIBRATIONS... DON'T FIGHT 'EM — JOIN 'EM



You know the old routine about the troops breaking step when marching across a bridge. That's to keep from setting up a series of rhythmic vibrations that could shake the bridge to its underpinning.

Well, if those little ol' vibrations can do that to that big ol' bridge, just think what they can do to your engine-driven power units and generators. Especially those sitting around on concrete floors or hardtop, with nothing to cushion the shock.



They can reduce that generator to a pile of throbbing and gasping metal, that's what—and in pretty short order. This is especially true of those 15KW and smaller.

Some of these generators and power units were designed with the thought in mind that they'd be operated in a trailer or truck. This way they could get the benefit of the tires, springs and shocks of the vehicle.

All well and good.

But when you have to operate the unit on the cold-cold ground, hardtop or concrete floor, some mighty nasty things start happening.

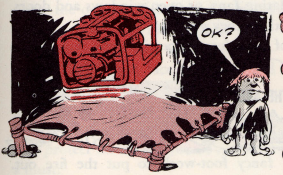
The vibrations start looking for a place to go. They start pitty-pattying down and around the frame to the ground in a perfectly natural and playful mood. But that hard-hearted ol' ground refuses to pick up the cadence. It says "beat it, buster," so right back up the frame they go, building up power like steam in a boiler.

Now, vibrations are bad enough when they're free and unhampered. But when they're forced to stop and back up they're giant killers. So it's not their movement that hurts so much—it's their sudden stoppage.

All these vibrations want is a little path to follow so they can go about their business. But when you bottle 'em up, they get a little frantic and start looking for the panic button. And they have one big ace up their sleeves—they can't be stopped. You either play along with 'em or your equipment suffers the consequences.

So how do you play ball with 'em?

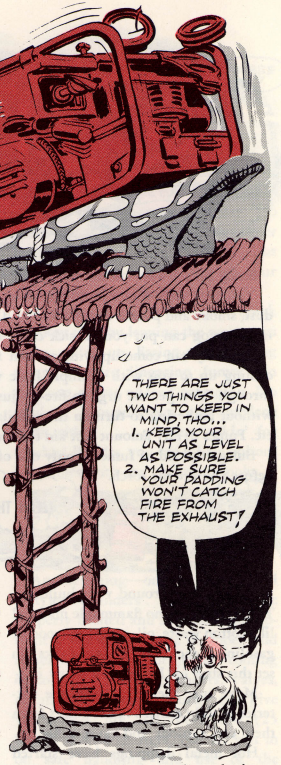
Well, you give 'em as many healthy outlets for their playful vitality as you can. That is, you do your darndest to operate your unit from a surface that



has some "give" to it so that it'll help cushion the vibrations by picking up the cadence.

The hard ground is much better than concrete or hardtop . . . and soft, freshly loosened ground is better yet. A board or two under the skid or frame works wonders .

'S matter of fact, just about anything you can think of to pad out that hard surface is well worth the effort. But you should use material that won't get soaked with fuel or engine oil.



With vibrations you're playing a sorta deadly game of musical chairs. But if they don't find a place to squat, you're the odd man out. They're sorta spoiled that way.

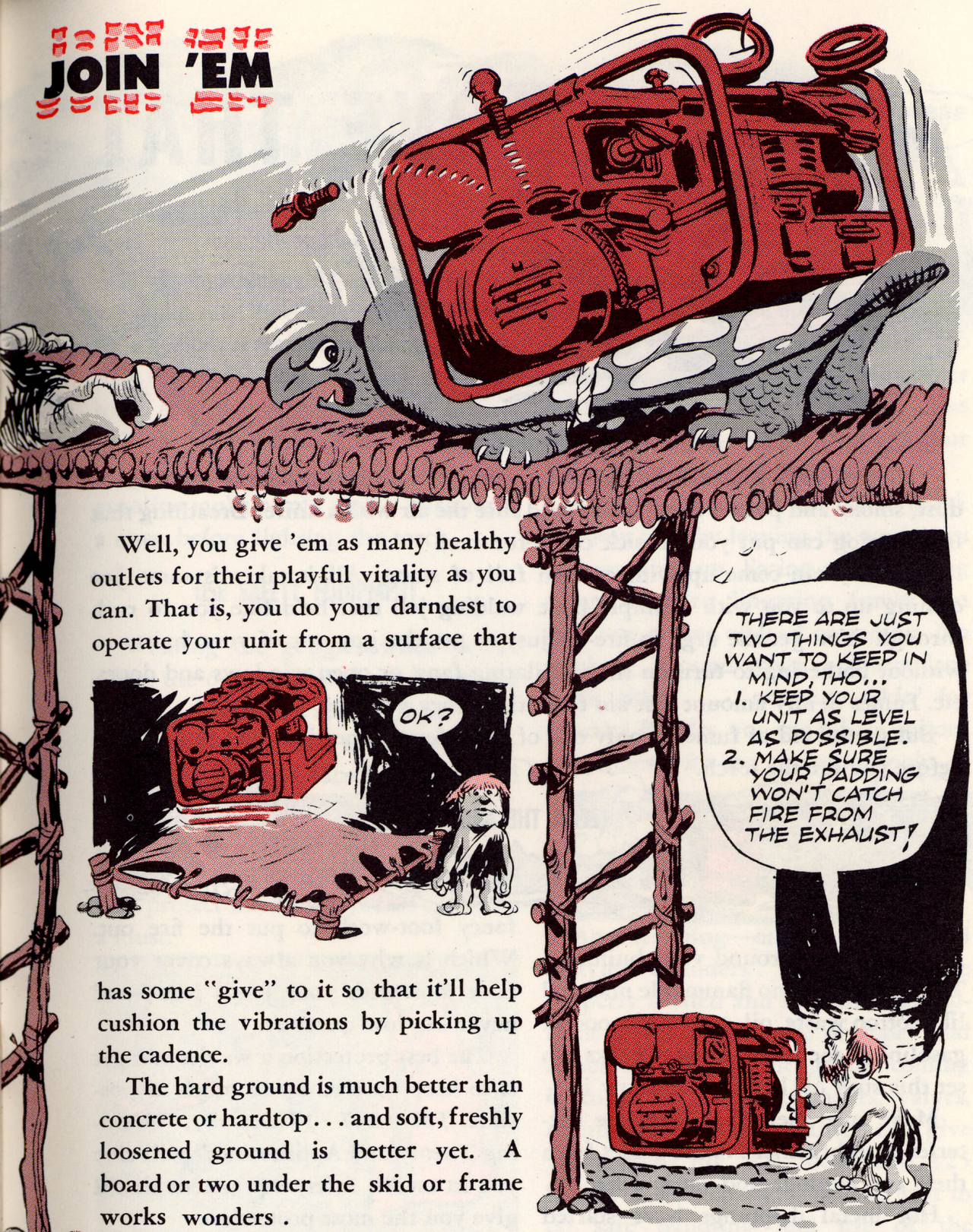
JOIN 'EM

Well, you give 'em as many healthy outlets for their playful vitality as you can. That is, you do your darndest to operate your unit from a surface that

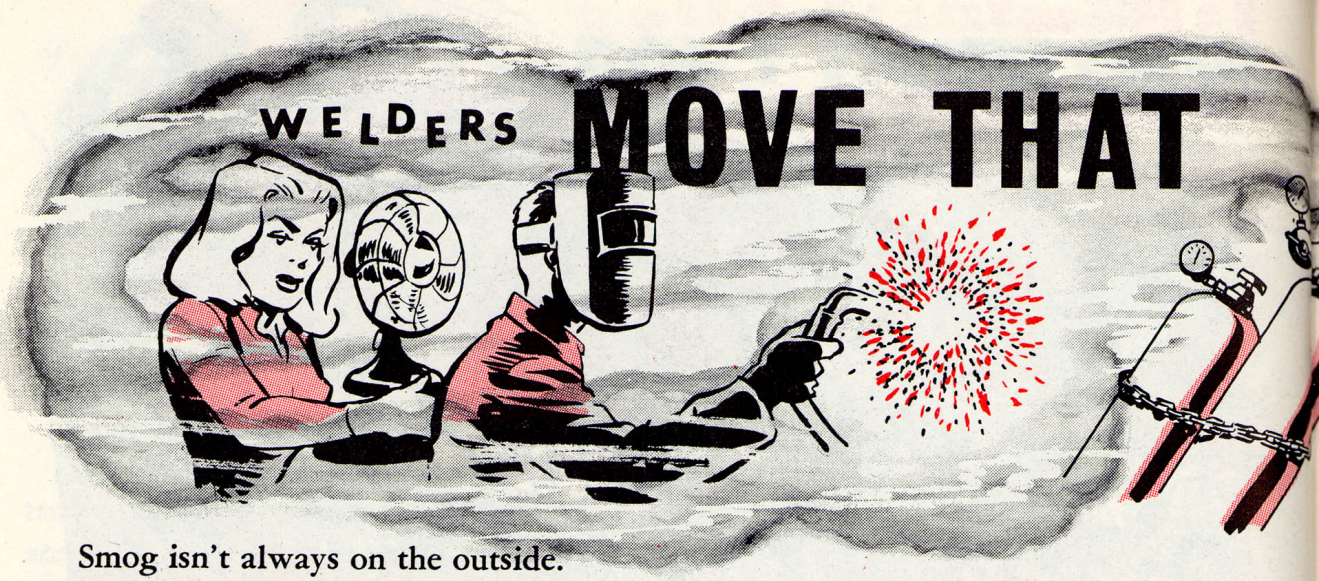
has some "give" to it so that it'll help cushion the vibrations by picking up the cadence.

The hard ground is much better than concrete or hardtop . . . and soft, freshly loosened ground is better yet. A board or two under the skid or frame works wonders .

'S matter of fact, just about anything you can think of to pad out that hard surface is well worth the effort. But you should use material that won't get soaked with fuel or engine oil.



With vibrations you're playing a sorta deadly game of musical chairs. But if they don't find a place to squat, you're the odd man out. They're sorta spoiled that way.



Smog isn't always on the outside.

You ever walk into a building where a welder's torch was stirrin' up so much dust, smoke and poison fumes you could slice the air with a knife? Breathing that inside smog can put you on sick call—for real.

Anybody can come up with a room full of smog. All it takes is some Joe coming up to you with a simple little welding job that he'd like you to rush through. You get the urge to fire-up just to get the guy out of your hair . . . without bothering to turn on the ventilating fans, or open windows and doors, etc. Fumes in any amount just ain't healthy—they gotta go!

But gettin' rid of fumes is only one of the safety precautions you should take before you fire the torch.

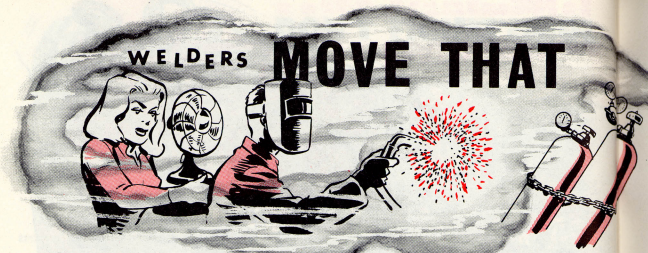
Take a look around your building! There should be no flammable material like cotton waste, oil, scraps of wood or gasoline in the room. Flying sparks can set this stuff off before you know it.

Make sure there's no wet-type batteries in sight either . . . the gasses from them can explode and cause a fire.

Hot metal drippings have started more than one type of fire . . . you ever get welders' hot-foot? You know the kind—you're goin' at it hot and heavy when smoke starts rising from inside your boot. So you come up with some fancy foot-work to put the fire out. Which is why you always cover your boot tops with your pants legs—and never use low quarters.

The best protection a welder can get is to keep covered up as much as possible. TM 9-237 (17 Oct 58), "Welding Theory and Application," will clue you in on the safety equipment that'll give you the most protection.

For the protection of other people in the area it's a good idea to work behind a fire resistant screen or within a closed area. This will guard them from possible eye injury.



Smog isn't always on the outside.

You ever walk into a building where a welder's torch was stirrin' up so much dust, smoke and poison fumes you could slice the air with a knife? Breathing that inside smog can put you on sick call—for real.

Anybody can come up with a room full of smog. All it takes is some Joe coming up to you with a simple little welding job that he'd like you to rush through. You get the urge to fire-up just to get the guy out of your hair . . . without bothering to turn on the ventilating fans, or open windows and doors, etc. Fumes in any amount just ain't healthy—they gotta go!

But gettin' rid of fumes is only one of the safety precautions you should take before you fire the torch.

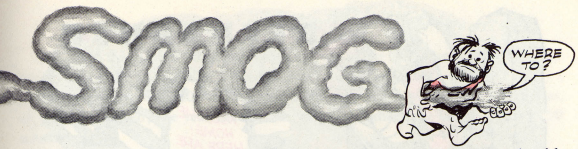
Take a look around your building! There should be no flammable material like cotton waste, oil, scraps of wood or gasoline in the room. Flying sparks can set this stuff off before you know it.

Make sure there's no wet-type batteries in sight either . . . the gasses from them can explode and cause a fire.

Hot metal drippings have started more than one type of fire . . . you ever get welders' hot-foot? You know the kind—you're goin' at it hot and heavy when smoke starts rising from inside your boot. So you come up with some fancy foot-work to put the fire out. Which is why you always cover your boot tops with your pants legs—and never use low quarters.

The best protection a welder can get is to keep covered up as much as possible. TM 9-237 (17 Oct 58), "Welding Theory and Application," will clue you in on the safety equipment that'll give you the most protection.

For the protection of other people in the area it's a good idea to work behind a fire resistant screen or within a closed area. This will guard them from possible eye injury.



If any bystanders have to get into the act make sure they have eye protection. In addition, if you're welding outside, they should stand upwind to your torch to escape any fumes.

If the work's to be done on any type of closed container—such as oil drums, gasoline tanks or old pipe—purging is a must before lighting the torch.

USE SAFETY EQUIPMENT

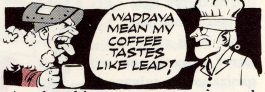
Wearing the goggles when you're using the oxy-acetylene tool kit or the welding helmet (with the right lens) with your electric arc set-up will protect your eyes and face from harmful light rays and metal burns.

Leather gloves are also a must.

The leather apron in your tool kit will protect the rest of you . . . it's also a must.

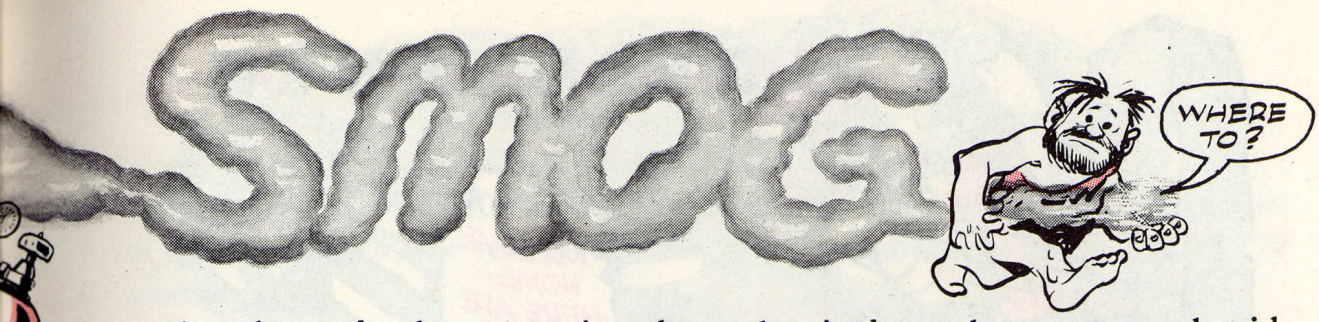
But before actually lightin' up take a good look at the type of metal you're working with 'cause you might need some extra protection. For example if you braze, weld, or cut up brass, zinc, galvanized metal or any metal with lead-based paint, you could be about to breathe some poisonous fumes. So when you work on these, and any other metals that can give off dangerous fumes, **be sure** you turn on **all** your air fans to move the fumes outside.

And play it safe at the coffee break or chow time by leaving the work area and washing up. Eating and drinking where there're lingering fumes can give you a dose of lead poisoning. No smoking around your oxy-acetylene outfit either . . . no sense askin' for trouble! Besides, you can inhale poisonous fumes with the cigarette smoke.



Another thing—on your oxygen and acetylene cylinders . . . they have to be properly located and secured in an upright position with wire or rope. And remember that oil or grease coming in contact with the cylinders, valves, regulators, gages or fittings can give you a mean fire. AR 700-8120-1 (25 Sep 59), with changes, can fill you in on safe handling and use of the cylinders.

Smoke and fumes go hand in hand with welding. You'll stay in the pink by moving that **inside** smog **outside**—**every time.**



If any bystanders have to get into the act make sure they have eye protection. In addition, if you're welding outside, they should stand upwind to your torch to escape any fumes.

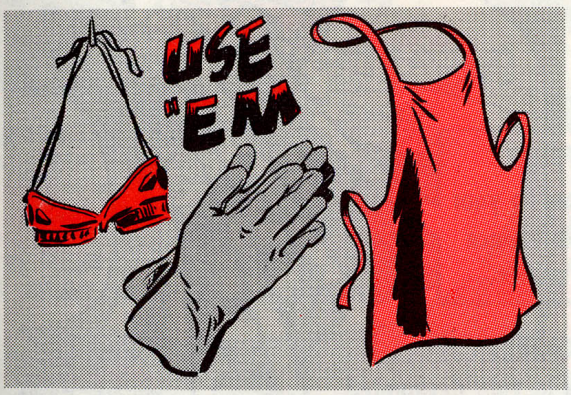
If the work's to be done on any type of closed container—such as oil drums, gasoline tanks or old pipe—purging is a must before lighting the torch.

USE SAFETY EQUIPMENT

Wearing the goggles when you're using the oxy-acetylene tool kit or the welding helmet (with the right lens) with your electric arc set-up will protect your eyes and face from harmful light rays and metal burns.

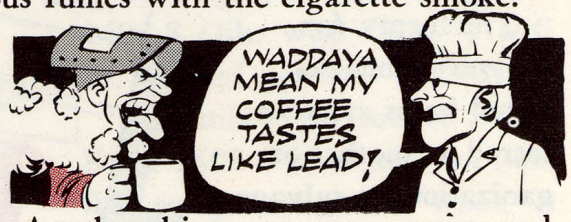
Leather gloves are also a must.

The leather apron in your tool kit will protect the rest of you . . . it's also a must.



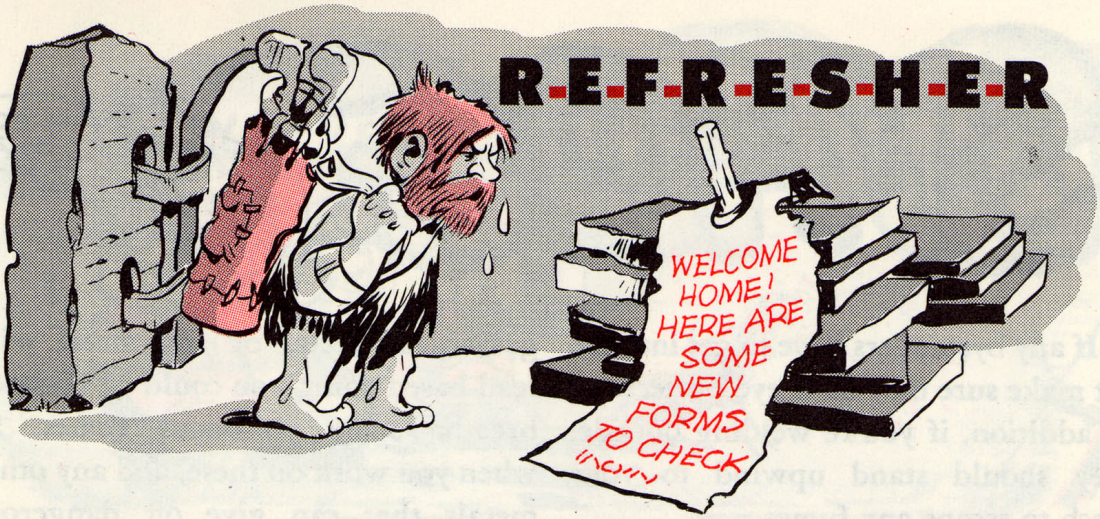
But before actually lightin' up take a good look at the type of metal you're working with 'cause you might need some extra protection. For example if you braze, weld, or cut up brass, zinc, galvanized metal or any metal with lead-based paint, you could be about to breathe some poisonous fumes. So when you work on these, and any other metals that can give off dangerous fumes, **be sure** you turn on **all** your air fans to move the fumes outside.

And play it safe at the coffee break or chow time by leaving the work area and washing up. Eating and drinking where there're lingering fumes can give you a dose of lead poisoning. No smoking around your oxy-acetylene outfit either . . . no sense askin' for trouble! Besides, you can inhale poisonous fumes with the cigarette smoke.



Another thing—on your oxygen and acetylene cylinders . . . they have to be properly located and secured in an upright position with wire or rope. And remember that oil or grease coming in contact with the cylinders, valves, regulators, gages or fittings can give you a mean fire. AR 700-8120-1 (25 Sep 59), with changes, can fill you in on safe handling and use of the cylinders.

Smoke and fumes go hand in hand with welding. You'll stay in the pink by moving that **inside smog outside—every time.**



Now that you're back from leave, real limber from all that twistin', and rarin' to tackle your maintenance chores, how about giving some special thought to some of the new forms you recently met in TM 38-750, "The Army Equipment Record System and Procedures". For example:

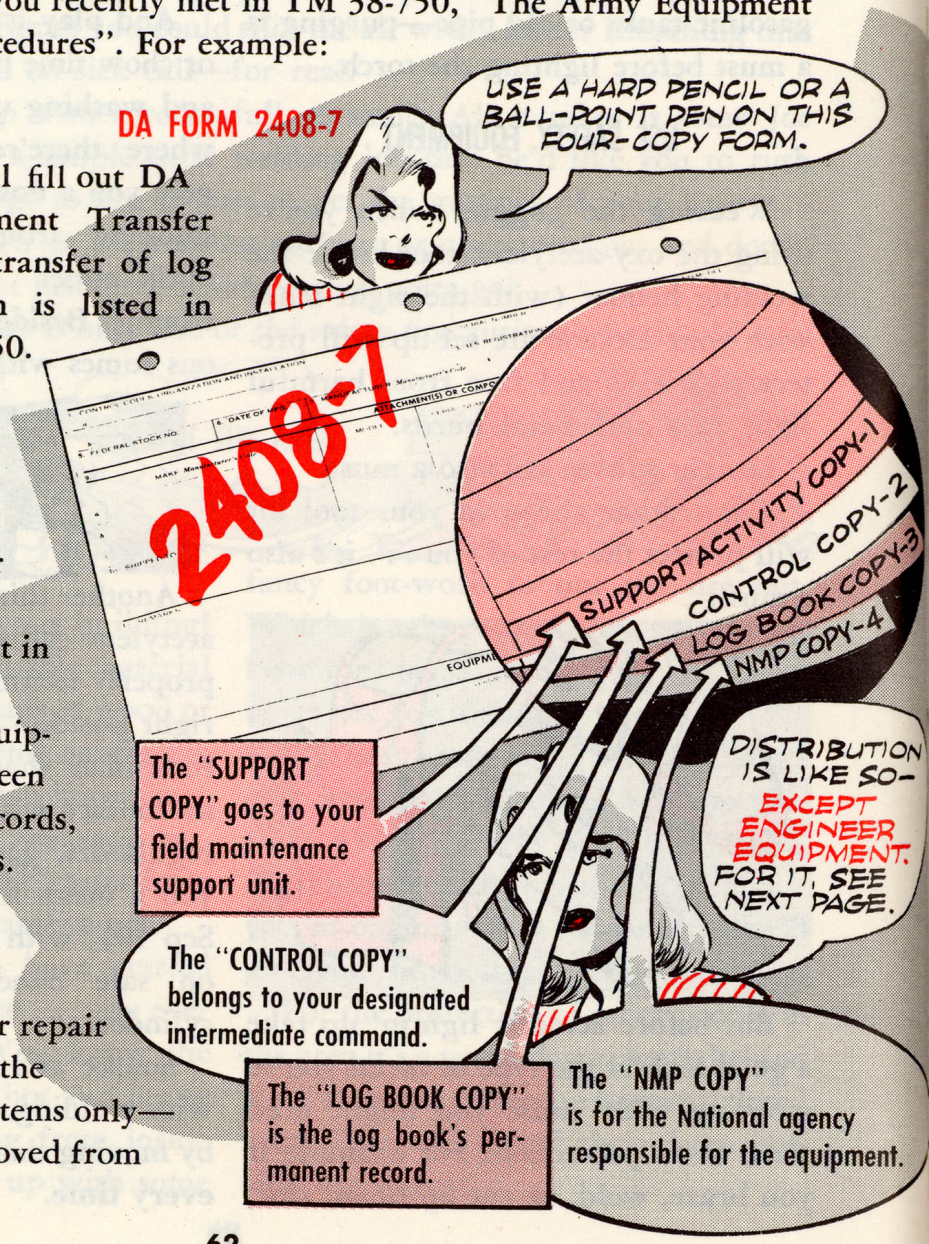
DA FORM 2408-7

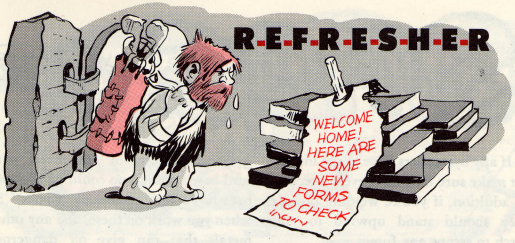
For the present you'll fill out DA Form 2408-7 (Equipment Transfer Record) to report the transfer of log book equipment which is listed in Appendix III, TM 38-750.

The form's for use *only* when selected items are transferred to another organization, to salvage or disposal or when it's turned-in as excess or lost in combat.

That is, when such equipment is transferred between property books, stock records, or other property records.

Remember— you don't use a 2408-7 when equipment is loaned or evacuated for repair and return to user. And, the form's for use on major items only— not for components removed from major items.





Now that you're back from leave, real limber from all that twistin', and rarin' to tackle your maintenance chores, how about giving some special thought to some of the new forms you recently met in TM 38-750, "The Army Equipment Record System and Procedures". For example:

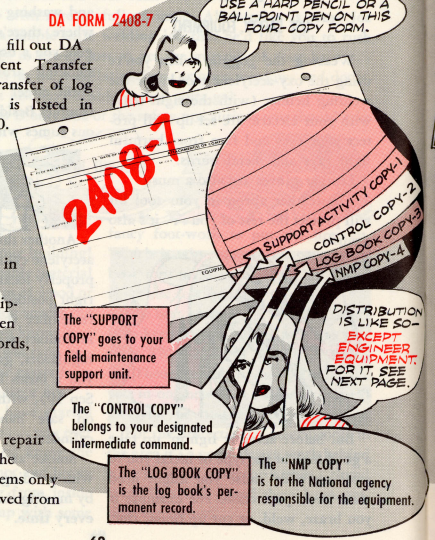
DA FORM 2408-7

For the present you'll fill out DA Form 2408-7 (Equipment Transfer Record) to report the transfer of log book equipment which is listed in Appendix III, TM 38-750.

The form's for use *only* when selected items are transferred to another organization, to salvage or disposal or when it's turned-in as excess or lost in combat.

That is, when such equipment is transferred between property books, stock records, or other property records.

Remember—you don't use a 2408-7 when equipment is loaned or evacuated for repair and return to user. And, the form's for use on major items only—not for components removed from major items.



FORGET OLD TRANSFERS

One more thing on the transfer record . . . use of the DA Form 2408-7 is mandatory as of the date the new record system went into effect in your area . . . you're not to make a 2408-7 on any equipment you transferred, swapped, lost, or gained last year, the year before that, or at any other time before TM 38-750 went to work.

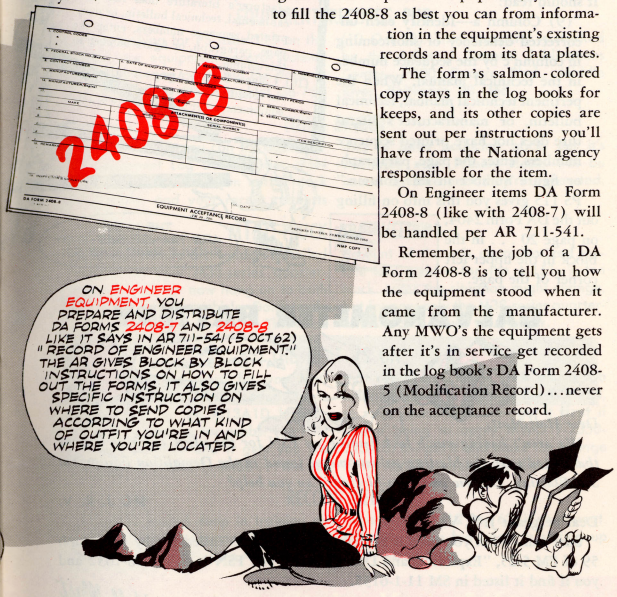
DA FORM 2408-8

DA Form 2408-8 (Equipment Acceptance Record)—This four-copy form records the status of equipment when it's accepted from the manufacturer. Usually, it'll be completed before the equipment gets to you. However, when you (the user) make out a log book for a piece of equipment, you have to fill the 2408-8 as best you can from information in the equipment's existing records and from its data plates.

The form's salmon-colored copy stays in the log books for keeps, and its other copies are sent out per instructions you'll have from the National agency responsible for the item.

On Engineer items DA Form 2408-8 (like with 2408-7) will be handled per AR 711-541.

Remember, the job of a DA Form 2408-8 is to tell you how the equipment stood when it came from the manufacturer. Any MWO's the equipment gets after it's in service get recorded in the log book's DA Form 2408-5 (Modification Record)...never on the acceptance record.

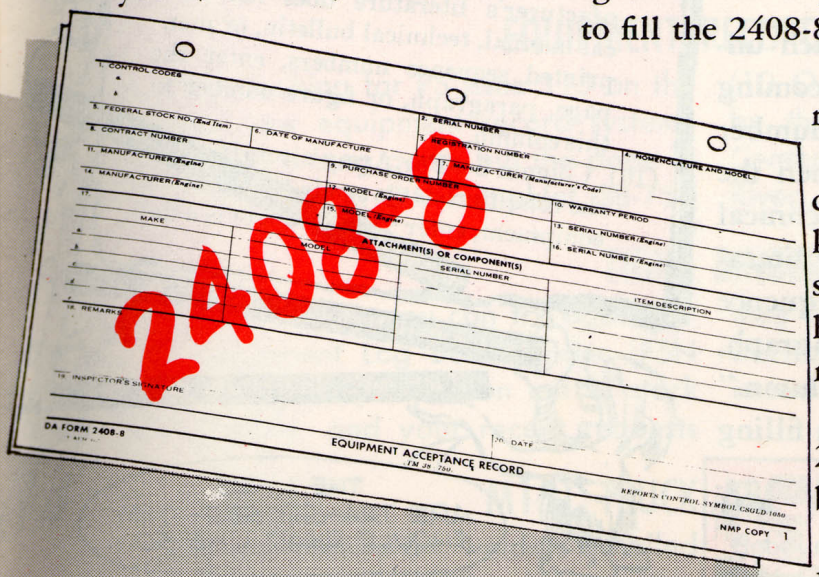


FORGET OLD TRANSFERS

One more thing on the transfer record . . . use of the DA Form 2408-7 is mandatory as of the date the new record system went into effect in your area . . . you're not to make a 2408-7 on any equipment you transferred, swapped, lost, or gained last year, the year before that, or at any other time before TM 38-750 went to work.

DA FORM 2408-8

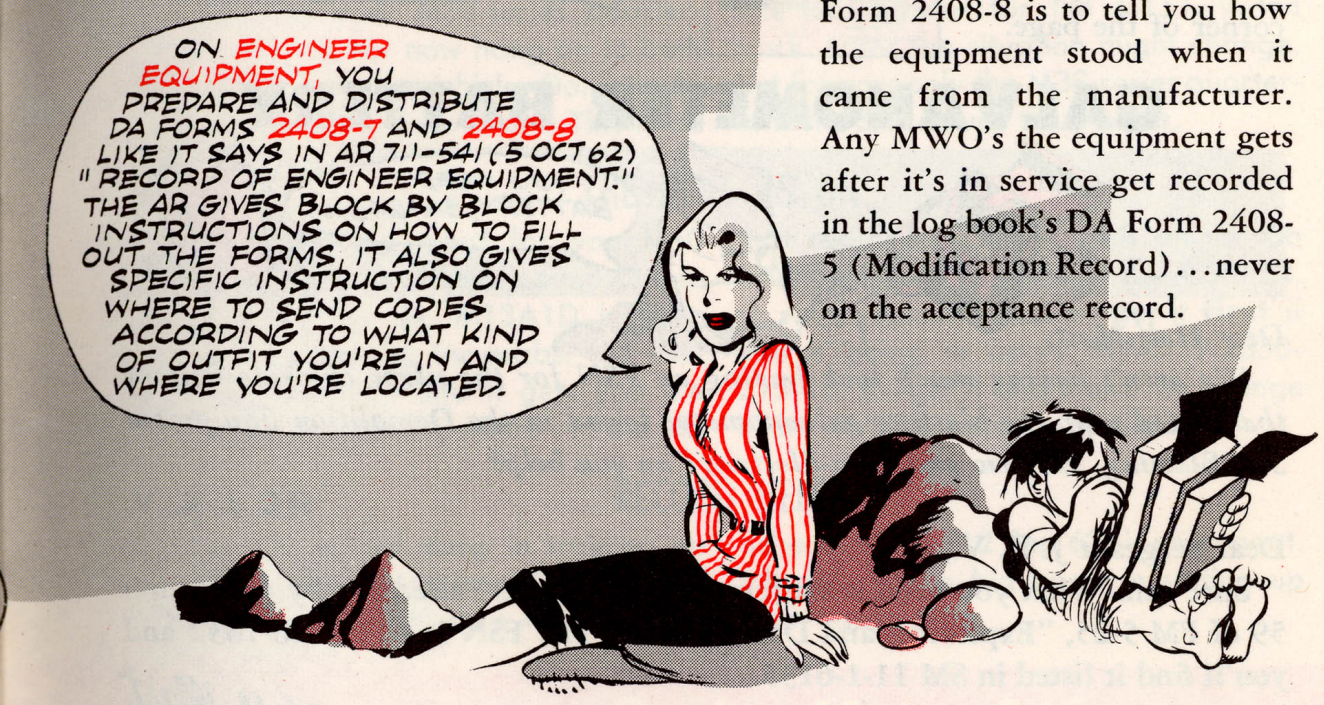
DA Form 2408-8 (Equipment Acceptance Record) — This four-copy form records the status of equipment when it's accepted from the manufacturer. Usually, it'll be completed before the equipment gets to you. However, when you (the user) make out a log book for a piece of equipment, you have to fill the 2408-8 as best you can from information in the equipment's existing records and from its data plates.

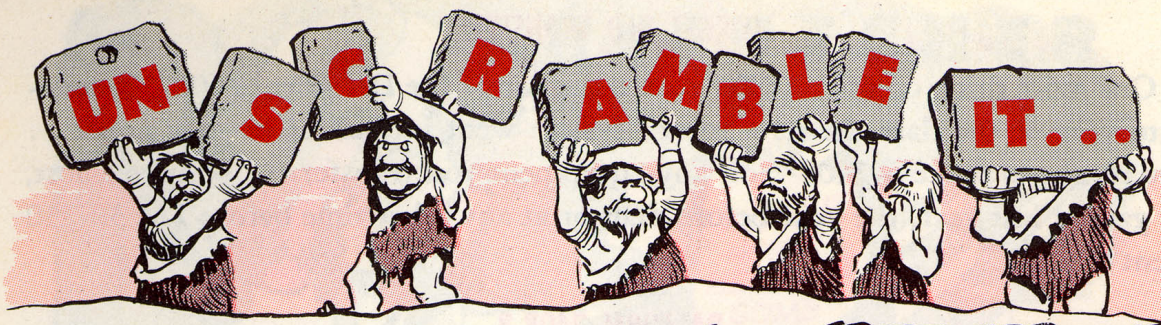


The form's salmon-colored copy stays in the log books for keeps, and its other copies are sent out per instructions you'll have from the National agency responsible for the item.

On Engineer items DA Form 2408-8 (like with 2408-7) will be handled per AR 711-541.

Remember, the job of a DA Form 2408-8 is to tell you how the equipment stood when it came from the manufacturer. Any MWO's the equipment gets after it's in service get recorded in the log book's DA Form 2408-5 (Modification Record)...never on the acceptance record.

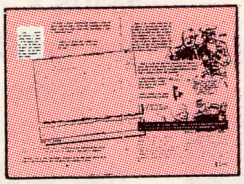


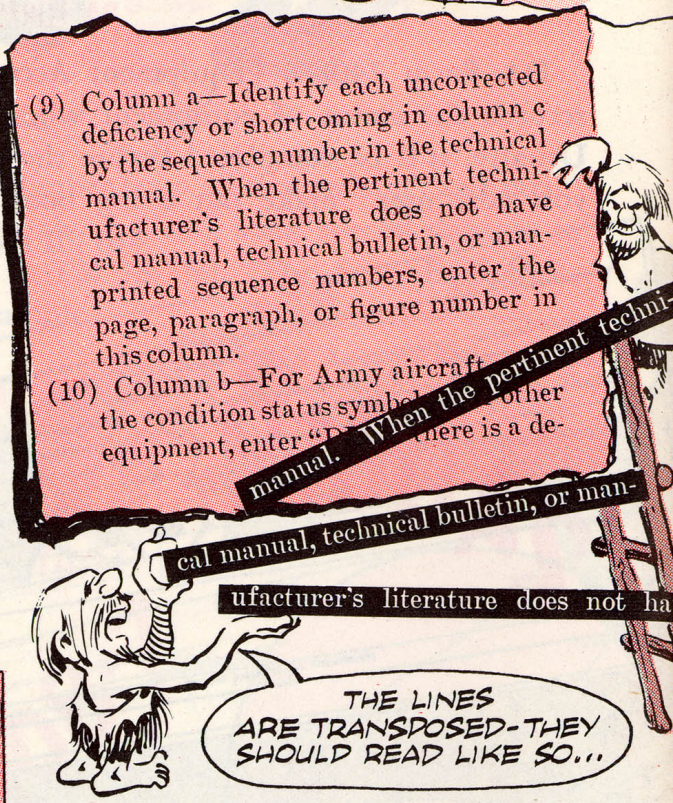


Your copy of TM 38-750 may have a couple of scrambled lines on page 27. Take a look at sub-paragraph 25 b (9). It should read:

"(9) Column a—Identify each uncorrected deficiency or shortcoming in column c by the sequence number in the technical manual. When the pertinent technical manual, technical bulletin, or manufacturer's literature does not have printed sequence numbers, enter the page, paragraph, or figure number in this column."

PS 115 gives you this info on filling out the DA Form 2404, on page 20 . . . in the block in the upper left corner of the page.





GALVANOMETER BATTERY

Dear Half-Mast,

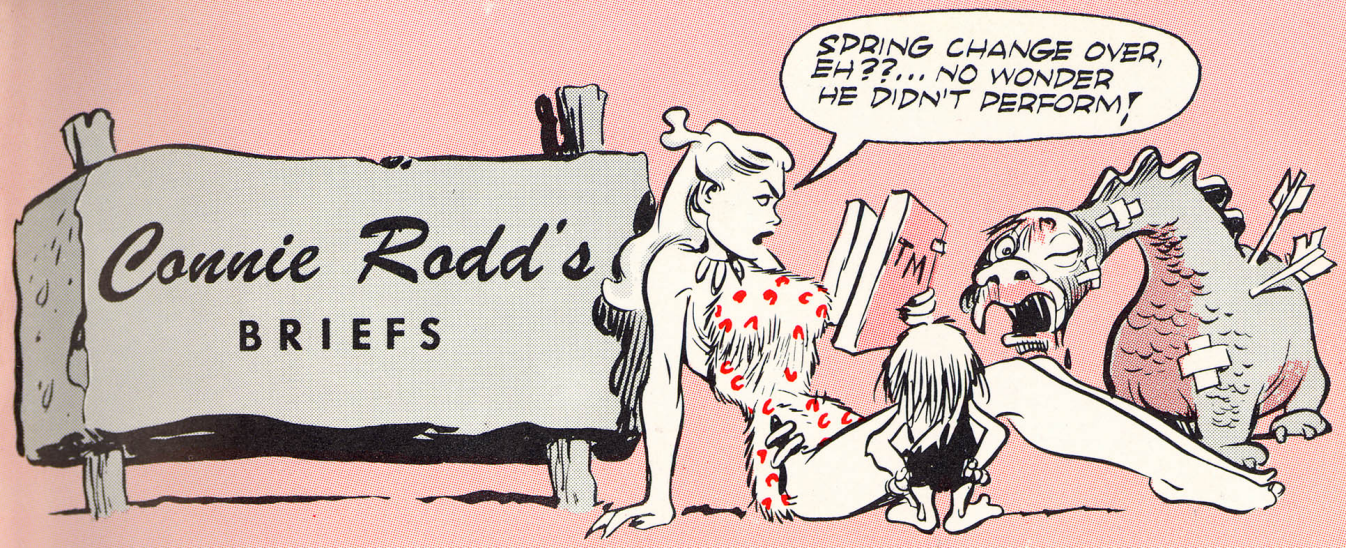
We aren't having much luck finding an FSN for the silver chloride battery that's used with the blasting galvanometer found in the Demolition Equipment Set, Blasting, Electric and Non-Electric. Can you help?

SFC J. R. V.

Dear Sergeant J. R. V.,

Sure can. What you need is Battery, BA-245/U, as called for by paragraph 59 of FM 5-25, "Explosives and Demolitions." The FSN is 6135-128-1632 and you'll find it listed in SM 11-1-6135.

Half-Mast



EQUIPMENT RECORDS PUB

Been looking for PS Issue 115 on the Army's new equipment record system? That issue is long gone, but the dope in it is now out in DA Pamphlet 38-750 (10 Oct 62). That pamphlet is stocked by the Adjutant General Publications Center, 2800 Eastern Blvd., Middle River, Baltimore 20, Md.

TIGHT BINDER

Come 1 April, you can try again for the Equipment Log Book binder (FSN 7510-889-3494). It's been out of stock for a while, and your recent requests may've been bouncing back. But it's available now. Present stocks will be issued for free until they're exhausted.

M151 TRUCK ARC WELDER?

You got mobile arc welders installed on some of your M38-series quarter-tonners? Well, for now hang on to both the welder and the vehicle. Don't trade in the M38 for a new M151. This is on account of there is no authorized mobile arc welder for the M151 ¼-ton truck. Later the situation might change, but for now only the M38-series quarter-tonners can mount the welder.

THE HEAT-T'S ON

Yup, that's the word for you M60 tankers. A new identification plate (ammo tab) for the M13A1D ballistic computer is now up for grabs. The FSN is 1220-973-3934 and it gets you the ammo tab for HEAT-T, M456 . . . the tab that replaces T-384E4. This ammo tab is being issued in place of the T-384E4, so save yourself trouble—get it **first** if you're going to apply MWO 9-2350-215-20/8—get it and make the change if the MWO's already applied.

RECORD HELP

If you're buried deep in training on the Army's New Equipment Records System (per TM 38-750), then Army Subject Schedule 38-1 (12 Sep 62) is your meat. It'll give you a big boost in setting up your lesson plan.

Would You Stake Your Life on the Condition of Your Equipment?

BATTERY GROUND STRAPS GO
OFF FIRST... ...ON LAST!
SLOW
TO SAVE YOUR EQUIPMENT!
AND YOUR SKIN.